

# School Management



**DON'T MISS THESE FEATURES:**

## SHARE YOUR COPY

When you are through with this issue, please pass it along to others. Use the convenient form below.

Assistant Superintendent ☐

Custodian ☐

Guidance Director ☐

Elementary Principal ☐

Home Economics Director ☐

Purchasing Agent ☐

PTA President ☐

Vocational Director ☐



## "Our Revere Tape Recorder proved a wise investment"

Economical price, thrifty operation...an invaluable teaching aid.

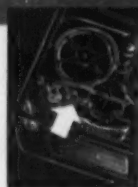
Many leading educators praise Revere as the ideal recorder for classroom use. So simple, even a youngster can prepare it for operation in a matter of seconds. And it saves expenses by giving a full hour's recording on one reel of re-usable tape. Teachers like it for the excellence of its high fidelity sound reproduction, and pupils respond to it with gratifying results. Moreover, Revere's price is well below those of other recorders of comparable quality. See your Revere dealer, or write and we will arrange a free demonstration.

REVERE CAMERA COMPANY • CHICAGO 16



Magnetic tape can be cut, spliced, edited with splicers and Scotch Tape! No tape is ever wasted.

Old recordings automatically erased as new ones are made. No danger of double exposures!



Fast forward and rewind speeds save valuable time in moving tape to desired position on the reel.

# Revere

## Magnetic Tape

RECORDER

**\$159<sup>50</sup>**



Show 16mm educational films at their best with

## Revere SOUND MOVIE PROJECTOR

Gives you bright, clear screen images and finest "Theatre-Tone" sound. Shows silent movies, too. Even youngsters can set it up and operate it easily. Slip-over carrying case holds accessories, doubles as speaker to make single unit weighing only 33 lbs. Many outstanding features. Priced amazingly low.

**\$299<sup>50</sup>**

Complete

# SCHOOL MANAGEMENT

ADMINISTRATION, EQUIPMENT, MAINTENANCE

Published monthly at Orange, Conn., by  
SCHOOL MANAGEMENT, INC.

A subsidiary of the  
Publishers of Parents' Magazine

52 Vanderbilt Avenue  
New York 17, N. Y., U.S.A.

Address correspondence to N. Y. office

Chicago Advertising Office  
360 N. Michigan Ave.

President & Publisher  
GEORGE J. MCHT  
Publisher also of Parents' Magazine

LUCILE D. KIRK, Executive Editor

MAIDA R. DAVIS, Assistant Editor

Educational Commentator  
EDGAR W. KNIGHT

Kanon Professor of Education  
University of North Carolina

Subscription rate \$2.00 a year  
Single copy 50c

Acceptance under Section 1103,  
P. L. and R. authorized



CHARTER MEMBER OF



MAY, 1950

VOL. 19, NO. 10

## ADVISORY EDITORS

Advisory Editors and their affiliated organizations do not necessarily endorse the statements or opinions in this magazine or claims in advertisements.

JOHN T. CATE, Asst. Superintendent in Charge of Business Affairs, Glendale, California, and Past President Asso. of School Business Officials

FRANCIS G. CORNELL, Director, Bureau of Research and Service, and Professor of Education, University of Illinois

BURTON P. FOWLER, Former President, Progressive Education Association; Principal, Germantown Friends School, Germantown, Pennsylvania

JOHN GUY FOWLER, Ph.D., Dean, School of Education, University of Wisconsin

I. O. FRISWOLD, Director, Building and Business Administration, Minnesota State Department of Education

RALPH E. HACKER, Member of the firm of Hacker & Walker, Architects, New York, N. Y., and Fort Lee, N. J.

GEORGE H. HOPKINS, School Architect, formerly Architect, Cleveland Board of Education

HAROLD D. HYND, Superintendent, Plant Operation and Maintenance, New York City Schools

SCHUYLER C. JOYNER, Deputy Business Manager, Los Angeles City Board of Education

EARL C. KELLEY, Professor, Secondary Education, Wayne University

HOWARD W. LEINBAUGH, Superintendent of Schools, Leominster, Illinois

WILLIAM LESCAZE, Architect, New York, N. Y.

R. R. LINS, Ph.D., Professor of Education, Teachers College, Columbia University

ERNEST S. NELBY, Ph.D., Dean, School of Education, New York University

ALONZO F. NYERS, Chairman, Department of Higher Education, New York University

RICHARD J. NEUTRA, F.A.I.A., Los Angeles, California

JOHN E. NICHOLS, Architect and School Building Consultant

WARD G. REEDER, Professor of Education, Ohio State University

FLOYD W. REEVES, Professor of Administration, University of Chicago

W. CARSON RYAN, Ph.D., Kanon Professor of Education, University of North Carolina

MARK C. SCHINERER, Superintendent of Schools, Cleveland, Ohio

PAUL W. SEAGERS, Asst. Professor of Education and School Building Consultant, Indiana University

GEORGE D. STRAYER, Ph.D., Professor Emeritus of Education, Teachers College, Columbia University

No responsibility is assumed for the return of unsolicited manuscripts. All manuscripts should be typewritten and accompanied by return postage.

Contents of this issue are listed  
in Education Index

# DO OUR SCHOOLS ATTEMPT TO DO TOO MUCH?

And are they perchance neglecting those responsibilities  
which they should first perform?

By EDGAR W. KNIGHT

School Management's Educational Commentator

PROBABLY as good a statement of the purpose of education as one will ever find is the one the great educational philosopher and statesman, Thomas Jefferson, wrote to Mann Page in 1795—"I do most anxiously wish to see the highest degrees of education given to the highest degrees of genius and to all degrees of it, so much as may enable them to read and understand what is going on in the world so as to keep their part of it going on right."

In his celebrated essay in 1859 dealing with education, "What Knowledge Is of Most Worth?" Herbert Spencer, the distinguished philosopher of the great scientific movement of the second half of the nineteenth century, quoted from an old song to show that people of that time could not study everything that was known or imagined:

Could a man be secure  
That his days would endure  
As of old, for a thousand long years,  
What things might he know!  
What deeds might he do!  
And all without hurry or care.

And Thomas Henry Huxley, eminent English biologist who stood up for Darwin and his momentous *The Origin of Species*, has been quoted as saying that the main purpose of education is to enable people to do well what they have to do, when they have to do it, whether they like it or not.

Since the times of these men knowledge has so greatly expanded that the extracurricular as well as curricular offerings in the schools and colleges now differ from those of the old days about as much as the oxcart and the horse and buggy differ from the automobile and airplane—offerings bewilderingly numerous and diffuse if not actually inflated almost to the point of educational indecency.

At the first annual dinner meeting of the National Citizens Commission for the Public Schools, central theme of the program was the obligations of the citizens to their schools. Chairman Roy E. Larsen read a letter from President Truman in which the Chief Executive said that the schools of this country "must be strengthened and improved if they are to equip today's children and youth to meet the need for intelligent, patient, and constructive leadership as the future unfolds."

President James B. Conant of Harvard described the



Dr. Knight, Professor  
of Education, University  
of North Carolina

Commission as "one of the outstanding events in the history of education in this half-century." General Omar N. Bradley, Chairman of the Joint Chiefs of Staff, said that "if some dramatic incident could shock the American people to an awareness of public education, they would react as unitedly as they did at Pearl Harbor." But he pointed to a parade of embarrassing statistics that failed to accomplish this purpose. The growing inadequacy of our public school system is creeping up on every community, he said.

The general's comments on this subject may sound harsh. During the past two decades, however, critics of the schools have seemed more numerous than formerly, especially in the educationally fair weather days of the middle 1920's. Many of these have pointed quite vigorously, and often quite sharply, to the chief hindrances to decent education in the United States. Some of them have said that among these hindrances is the eager and often apparently organized tendency to overload the schools with responsibilities or alleged responsibilities which should be assumed and met by other institutions, including the home, the family, and the church. Blame for this condition, which every year seems to become more and more congested, is charged by responsible observers and critics to fanciful claims of those entrusted with setting up instructional programs in the schools and with the training and certification of teachers to carry out such programs.

Perhaps few professional educators would agree with him, but in an article in *The New York Times* Dr. Bernard Iddings Bell charged the sad state of affairs to "the unrealistic pretensions of school administrators (school of education professors aiding and abetting them) who are understandably even though unforgivably anxious to magnify their office."

He also said: "Anyone who listens to current school pretensions and who knows the facts about equipment and personnel and financial resources is bound to conclude the American schools and colleges have been biting off more than they can chew. The results are bad.

Boys and girls have little time for a thorough mastery of the old-fashioned school subjects, because overworked and unskilled instructors are fooling around (Turn to page 15).

## DEPARTMENTS IN THIS ISSUE

Audio-Visual	Page 38	Coupon Page	Page 29
Books	Page 36	New Recordings	Page 34
Calendar	Page 23	School Lunchrooms	Page 16
		Teaching Materials	Page 34
		School Equipment, Manufacturers' Literature	18, 19, 28, 30, 31, 32, 33, 34, 35



**T**HE majority of our schools nationwide are confronted with a major problem—provision of safe, dependable, ample-sized busses to handle the ever-increasing enrollments being transported to the consolidated schools. In many cases not enough money is available to buy the necessary school busses to supplement or replace those that are overcrowded and unsafe.

At this time 2,710 school busses are now operating in Virginia, averaging five trips around the world every day in the school year, almost 23½ million miles.

A total of 140,000,000 miles have been traveled in this state without a fatal school bus accident. This, then, shows what can be done with efficient pupil transportation to consolidated schools, with careful supervision, with properly maintained busses bought because of their outstanding safety and construction features rather than because of low cost.

Virginia provides close cooperation with its schools on the problem of safe, dependable, comfortable school bus transportation. Its 100 counties are moving rapidly forward in better pupil transportation.

Generally speaking, school bus transportation in Virginia is locally supplied and county-owned. The state provides careful supervision and shares the cost at the state level. All school personnel and salaries are under local control. The state participates to the extent of insisting that all busses bought are acceptable from the safety standpoint; that in no instance will the state turn over more money to a county than has been spent on transportation; and that state money to the counties shall be based on the number of approved busses operating daily, on the number of miles traveled, and the number of pupils hauled daily. The schools must assure 180 days of school operation each year.

The state gives assistance in finance and supervision of pupil transportation. R. L. Wimbish, state supervisor of pupil transportation, and three assistants provide close cooperation with the county by:

1. Furnishing advice on shop and maintenance problems.
2. Setting up a minimum of one safety meeting a year in which experienced drivers devote two hours to discussing Virginia laws and state board of education regulations pertaining to schools and transportation.
3. Setting up a minimum of one meeting a year with drivers and a representative of the fleet insurance company.
4. Helping school systems with surveys in setting up new bus routes—especially in cases of consolidation of schools.



Section of garage and five busses



Safety patrols are very important

## 140,000,000 MILES OF SCHOOL BUS TRANSPORTATION WITHOUT A FATAL ACCIDENT!

Roanoke County, Virginia, schools are a typical example  
of the results of good equipment and maintenance

By R. DOUGLAS NININGER

Superintendent of Roanoke County Schools, Salem, Virginia

5. Making periodic inspections of the transportation equipment.

6. Issuing state financial assistance according to a definite formula adopted by the state board of education.

Roanoke County provides a typical example of how Virginia went about solving the transportation-consolidation problem. Here, great strides have been made in safer, more economical school bus transportation. Because it may be helpful to many other communities faced with a similar situation, let me cite the steps Roanoke County took, and show the splendid improvements that were effected.

One of the first moves Virginia made, as a

start toward a better school bus program, was to require that all-steel safety coaches replace outmoded, dangerous vehicles. This was in 1935. In Roanoke County three or four new busses a year were to be purchased, one or two to serve for replacement, the others to be placed in service on new routes. Seventeen all-steel safety busses were bought during 1948-49 to complete the replacement of old busses and to provide needed additional busses, as well as usable spare units.

Today Roanoke County has 37 county-owned busses and two privately-owned ones. The drivers are farmers, store employees, or are mechanics from the modern repair shop

Mr. Nininger and R. S. Hayden plan



Chalking up vital bus statistics



Mechanics do a masterly bus checkup



Photo courtesy Superior Coach Co., Roanoke



maintained by the county. The county policy has always been to employ adult drivers rather than schoolboy drivers. However, many systems do use students for drivers very successfully.

Under a consolidated school plan, 23 Roanoke County schools are served, including two which are exclusively high schools and one Negro central school combining both elementary and secondary grades. In 1948-49 there were 5,136 pupils bused, 82 by privately-owned busses. Approximately 338,400 miles are covered annually, 8,640 miles by the privately-owned busses.

The county-owned busses travel an average of 52.34 miles per day, and those privately owned travel 24 miles per day. Usually each bus covers several routes each morning and afternoon in reaching this total round-trip mileage. (In Virginia, no child under 10 years of age is required to walk more than one mile to school; children over 10 are not required to walk more than one-and-a-half miles. Most children walk much less than these maximum distances.)

#### Modern Repair Shop

In charge of Roanoke County's modern school bus garage repair shop is R. S. Hayden, superintendent of buildings and transportation. The main building includes one grease and wash room, plus two large shop spaces for general repair. Here, too, are located a parts room and a supply room which carries paints and other materials for the county. A separate building has been erected to take care of welding and seat upholstery work. A new paint shop is planned now, also.

An accurate service record on each school bus is kept on a large blackboard. It shows the bus number, mileage when grease and oil are checked, the date and mileage when front and rear wheels are packed.

Omer R. Yates, the foreman and chief mechanic, is assisted by three full-time mechanics. Roanoke County is fortunate in having been able to get all its equipment into a modern, safe condition and keep it that way through its modern maintenance shop.

At all times three or four spare units are maintained in order that the entire fleet can be kept in good repair. They provide replacement units while other busses are getting a 1,000-mile or monthly checkup.

The property on which Roanoke County's repair shop is located covers 1,000 by 500 feet, and is enclosed by a cyclone fence and ample storage areas. Here many of the county busses are parked on the lot during the school day, and here all busses are stored during the summer and other holidays.

The state allows approximately eight percent a year, which amortizes the cost of a bus over a 12½-year period. A few additional figures will be of interest to all school officials confronted with the problem of consolidation. The average cost per mile in Roanoke County for transporting pupils is 22½¢ (22½¢ county owned and 35¢ privately owned). The yearly average per pupil in 1948-49 was \$14.87 which is well below the state average of \$17.40.

#### Now Cartoons Identify Town School Busses

**B**UGS Bunny—leaving from the main driveway immediately!

With that call, the daily rampage begins and the small fry of Brighton School District 1 make a wild dash for their favorite school bus. Other kindergarten youngsters stand in line and wait patiently to board their own particular vehicles—Mighty Mouse, Eddie the Ele-

phant, Porky Pig, Pluto, or Donald Duck.

The school children think the mobile menagerie is the greatest thing since picture books. The school authorities like the idea, too, since it has relieved much confusion among youngsters who never could remember which bus to take home, according to the Rochester, New York, *Democrat & Chronicle*.

One such child was five-year-old Billy Slack. His dad, Joseph Slack, is build-

ing superintendent in charge of busses. He realized that it was difficult for little minds to remember busses by numbers; so he decided to do something about it. With the artistic help of a high-school senior, William Wayman, he painted large-size cartoon characters on the side of each of the six vehicles.

Russell Jock, school custodian and bus driver, aided in the project much to the delight of his own five-year-old daughter, Connie. When word got around that

Bugs Bunny and other cartoon animals were being painted on the school busses, the children came trooping out to the garage to see which mascot they would be traveling with.

Now, the pupils regard their bus group as a club and no longer stand about, uncertain which bus to take home. Even the parents who drop by the school inquire after the school busses by the name of the cartoon character on the side.

For more facts use Inquiry Card, SM-2M

# Compton's

## BELONGS IN EVERY CLASSROOM



No lag in interest here! Daily, in thousands of American classrooms, just such scenes are taking place. With Compton's handy, pupils find the answers to their questions at the time they arise. The Compton Fact-Index at the back of each volume is a never-failing quick-

reference source. Carefully selected teaching pictures combine with stimulating text to tell the full factual story. All material is carefully prepared to meet the reading needs of each grade level. These are just a few of the reasons why Compton's belongs in every classroom.



Elementary students find Compton's as fascinating as fiction. They turn to it eagerly for every subject.



In the science room, clear, workable experiments make Compton's essential classroom equipment.



Favored in the study hall, high school students have learned to save time by going to Compton's first.



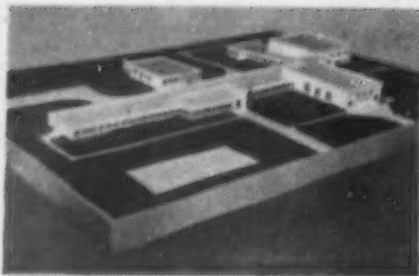
Even primary-school children like Compton's for its pictures.

Recent studies made in two school systems—one large, the other of average size—prove the encyclopedia the most valuable and yet the least expensive piece of classroom

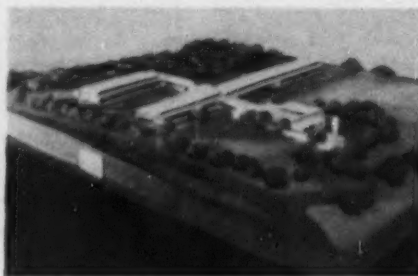
equipment. Using ten years as the average life of the encyclopedia, the cost of Compton's is only one-third of one per cent of the cost of operating a modern classroom.

Budget for classroom encyclopedia. Earmark funds for Compton's.

**F. E. COMPTON & COMPANY** • 1000 N. Dearborn Street, Chicago 10, Ill.



Campus plan is shown in design of Sumner, Mississippi, consolidated school, left. Shops and music classes are in separate building in center rear, connected with main structure by covered corridor. . . . The Cosin Elementary School, right, was built through joint efforts of the Austin



Board of Education and the University of Texas. All of the 20 classrooms are outside ones. School features outdoor teaching areas, and cost \$11.75 per square foot. Gym and auditorium are off at right end to avoid noise problem. . . . Photos, Providence (Rhode Island) Sunday Journal

## TO BUILD, but HOW to BUILD?

**This was one of the big and burning questions discussed by thousands of school superintendents at the recent AASA meeting**

**M**OST of the time the sun shined brightly in Atlantic City on Warren T. White, newly elected president of the AASA, and the 12,000 other school administrators who were attending the big annual session of that group. Theme of the convention was "Education, Dynamic of Democracy."

Elected as second vice-president, to serve for a year, was Jordan L. Larson, superintendent of schools, Mt. Vernon, New York. Elected to serve for four years as a member of the executive committee was Virgil M. Rogers, superintendent of schools, Battle Creek, Michigan.

Incidentally, Dr. Rogers' description of a school superintendent was enthusiastically received. Said he, "The job calls for a person with the skin of a rhinoceros, the emotional

equipment of a whale, and the agility of the opossum to roll with the punch and play dumb at the proper time. He needs these qualities in order to hold a responsible superintendency for more than one or two term contracts, without acquiring a thrombosis or a deep affection for selling life insurance."

"One superintendent well illustrates the point," he continued. "He refused to join his wife on a vacation at a dude ranch, explaining that after straddling issues all winter a dude ranch had no appeal for him."

While the educators reinforced their plea for federal aid to education, the education committee of the House was quietly shelving the bill. This committee passed a resolution 13 to 11 that it would not report out any bill for federal aid to education unless the Presi-

dent gave assurances that Oscar R. Ewing, would not dominate such a program.

President Truman later stated that neither he nor any other official nor agency of the Government would attempt to gain control of education in the country's public schools.

While the location of the 1951 convention is still unsettled, there seems to be a good possibility that it will be held in Atlantic City, the only spot in our nation which can house so tremendous a convention. There seems reason to suppose that regional conventions may be held every third year.

Probably more than half of the 12,000 educators at the 1950 convention found their way back to Room B in the auditorium where a splendid exhibit of new school building pictures, plans, and models was shown. Seventy-five architectural firms staged 120 exhibits which included 20 models of new and proposed buildings. Plans ranged from traditional to exceedingly modern.

Several architects were on deck to explain their exhibits, and every day at least one qualified official guide was besieged with questions by the schoolmen. Guides included Ray Hamon and Nelson Viles of the U. S. Office of Education; John Marshall of the Massachusetts State Department of Education; John Lewis, assistant superintendent of Baltimore; and Don Essex of the New York State Department of Education. Shirley Cooper, assistant secretary of the AASA, had charge of this exhibit sponsored by the AASA and the AIA.

It wasn't at all unusual to see a school administrator, camera in hand, snapping shots of the various plans. Flashlight bulbs popped quite energetically. S. C. Mitchell, superintendent of Benton Harbor, Michigan, took a large number of color transparencies which he will show to his board. In fact, so great was the interest in this building exhibit that "official" photographs were taken before the material was dismantled. These will be put on slides and be available for rental from the audio-visual department of the NEA.

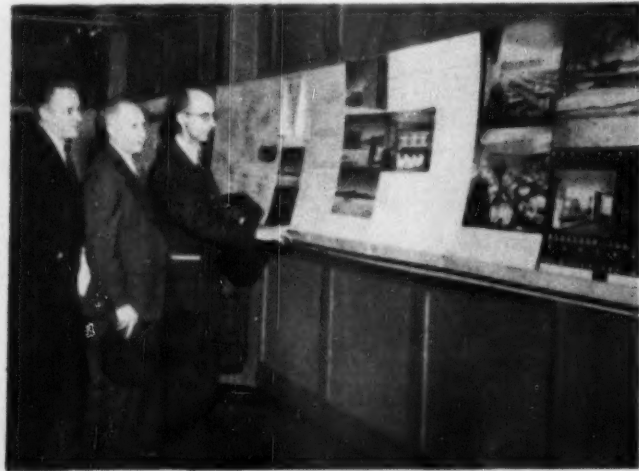
It was plain to see that lighting is having a tremendous effect on modern classroom design. From Alaska to Texas, architects are going to great lengths to get good lighting.

Clerestory windows furnished one solution. Some of the schools have sloping ceilings and clerestory windows on one side; others have raised ceilings and clerestory windows on

Interested group examines plans of the Rose Elementary School of Tucson, and the Jefferson School of Findlay, Ohio. Left to right they are Ray L. Hamon of the U. S. Office of Education who, pencil and notebook in hand, took many a vivid note; Willis A. Whitehead, the educational consultant for Outcalt, Guenther and Associates of Cleveland; John W. Lewis, assistant superintendent, Baltimore; and John M. Herrick of Ohio State University.



Architect William Arild Johnson of Everett, Washington, admires plans of the elementary school for Richfield, Minnesota. With him are W. L. McClellan, business manager, and L. N. Nicholas, superintendent of schools, Elyria, Ohio. Recently Elyria passed a \$3,700,000 school bond issue—the largest in Ohio. In the next five years the town will build two elementary schools and four additions, one high-school addition, and a brand new high school.



two sides. Schools with glass block above and clear vision strips below were another solution.

At least half of the schools shown made use of glass blocks. That led one architect to raise the question as to whether some school boards and architects are not merely following a trend.

"Is it necessary," he asked, "for every logically designed school to use glass blocks? After all, these blocks offer only one of many possible solutions for good lighting. What is the best technique in one situation is not necessarily the best in another. Architect and school board must work together on the best solution. Watch the band wagon, but don't necessarily jump on it. Listen to the music."

Noted, among the other approaches to good lighting, was the use of sun-controlled baffles and light-reflecting louvers.

Most of the architects are pleasingly color conscious and use excellent paint combinations to help achieve better lighting effects.

#### Natural Light

In the Central Richfield Elementary School (Minnesota) extensive windows along the south give maximum natural warm light in the classrooms. This is reinforced by a continuous clerestory unit along the north. Venetian blinds are used to control excessive light on the south. In the classrooms a continuous metal light cove provides artificial light on dark days. The open cove permits easy replacement of bulbs.

While some new schools use incandescent lighting, the majority use fluorescent lighting. One interesting classroom had an entire ceiling of egg-crate fixtures.

Another modern trend was to the finger plan school. The plan seems excellent where there is plenty of land available. It allows for flexibility and extensibility. (Several of the schools featured greatly extended fingers.)

The campus-type school had a place, too. In fact, one elementary school shown featured several two-room units.

One-story schools were more the rule than the exception; so were larger classrooms, with movable furniture.

#### Unique Roof

Among these many fascinating exhibits the Rose Elementary School of Tucson, Arizona, created great interest because of its unique aluminum roof. This was developed in connection with a solar heating system used, according to the architect, Arthur T. Brown, because of high specific heat absorption and because of insulation value in reflective surfaces. Aluminum pan construction takes the place of ceiling joist, rough ceilings, roof sheeting, and roof covering.

Tucson has 360 days of sunshine, so is an ideal spot for solar heating. During the winter, school is held in the warmest part of the day. The unit heater placed at a high corner of each room draws the warm air out of a plenum along the high line of the shed roof and lets it return back to the plenum along the low line of the roof. Placing of the supply and the return at opposite angles on the diagonal in the room prevents any short circuit of air through one pan and enables the air to flow through all of the pans evenly. This means of heating, warns the architect, should only be applied to a part of the country where there is little humidity and the climate is mild.

The function of any school is to satisfy teaching needs. Its size, shape, and equipment must satisfy the educational process. When school boards, superintendents, and architects keep this basic fact in mind the children benefit greatly. This was the big lesson at the building exhibit.

WHEN the Arkansas State Department of Education sent a caravan of trucks around the state showing what better equipped, better taught schools could mean, Chambers of Commerce helped get the people out to see it. Local publicity, community forums, and speeches before civic and business groups helped the people make up their minds in favor of investing in education, reports *News and Cure*.

To back up better schools, Arkansas

went to the polls in September in record numbers to vote the needed taxes and bonds. Of all proposals in the 423 districts, 95 percent were approved. Operating revenues were increased over \$4,000,000, and bond issues totaling more than \$18,000,000 were successful. More efficient, better schools were assured for the children of the state.

School district reorganization has already reduced Arkansas' 1,600 districts to 423 — in less than a year.

THERE was no waiting line for Los Angeles kindergarten children this year. The new law making children eligible for kindergarten according to age, plus increased facilities, made the "midnight vigil" a thing of the past.

D. R. WILLIAM R. Wood of Evanston, Illinois, has been appointed Specialist for Junior Colleges and Lower Divisions in the Division of Higher Education of the Office of Education.

For more facts use Inquiry Card, SM-2M

# REVOLUTION IN FOOD PRESERVATION

## ...schools teach revolutionary method with Home Freezers

This "revolution" is a real step forward in home economics teaching. Equipment-wise, it requires only the installation of one or more modern home freezers in the laboratory.

Many schools now find the home freezer helpful not only for detailed instruction in the preparation and packaging of fresh foods for freezing—but for freezing and storing cooked foods. For example, in one school family-sized recipes are prepared, and the food is frozen for use in meal planning units later. Types of foods frozen and stored include not only meats, fruits and vegetables, but rolls, pies, cakes, cookies and candies.

A home freezer adds new interest and practical value to instruction in meal planning, food buying and preparation, kitchen planning, home management and food budgeting.

No special wiring is needed for an Electric Freezer. It

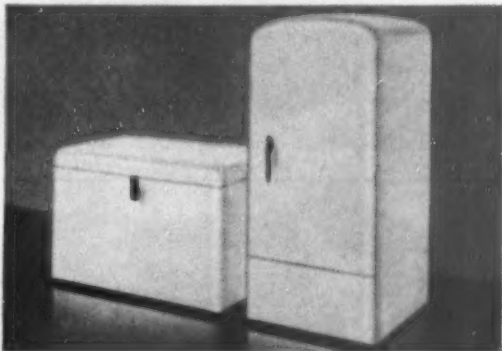


may be located wherever most convenient, and simply plugged into the nearest electric outlet.

Home economics teachers, members of school boards, and other school officials may get complete information about this appliance and about how to equip their home economics departments with it, from local electric service companies, appliance sales organizations, or by writing to the manufacturers.

## Informative Source Book Offered FREE!

To help in the teaching of home freezing, a 28-page source book—"How to Enjoy Better Meals with Less Work at Lower Cost"—is offered. This is a complete and comprehensive piece of literature, profusely illustrated, covering every phase of the modern Home Freezer and its uses. Includes fruit and vegetable freezing charts. No home economics teacher will want to be without this extremely helpful source book, offered absolutely FREE. Use coupon!



## What is a Farm & Home Freezer?

"A Farm and Home Freezer is the household type of low-temperature, mechanically refrigerated cabinet used exclusively for the freezing and/or storage of frozen foods."

It is in no sense a substitute for the conventional household refrigerator.

Of course... it's ELECTRIC!

You can't teach Home Freezing without a freezer!

#### FARM & HOME FREEZER SECTION

National Electrical Manufacturers Association

155 East 44th Street, New York 17, N. Y.

ADMIRAL • BIRN-HUB • BISHOP • COOLRATOR • CROSBY • DEERFREEZE  
FRIGIDAIRE • GENERAL ELECTRIC • GRISCH • HOTPOINT • KELVINATOR  
INTERNATIONAL HARVESTER • MORGE • SANITARY • SCHAEFER  
SIBCO • STERNHOF • SUB-ZERO • WESTINGHOUSE • WHITING

### Mail this for FREE source book!

FARM & HOME FREEZER SECTION  
National Electrical Manufacturers Association  
155 East 44th Street, Dept. SM-5  
New York 17, N. Y.

Please send me, absolutely FREE, copy of "How to Enjoy Better Meals with Less Work at Lower Cost."

YOUR NAME .....

NAME OF SCHOOL .....

STREET & NO. ....

CITY, ZONE & STATE .....



## Some School Site and Building Criteria

**B**ECAUSE sites can become obsolete as quickly as buildings, sometimes quicker, it is essential that selection of site and community planning and zoning proceed hand in hand. Schools serve residential areas. Natural attendance areas of an adequate size that can be outlined by traffic arteries and natural boundaries such as creeks and railroads are desirable. Particularly choice

is the site bounded by greenbelts and parks. Any building should be adapted to the site, should conform to contours of the land, stated Charles F. Carroll, superintendent of city schools, High Point, North Carolina. The following six paragraphs are excerpted from his talk.

Size of site, of course, is determined by the nature and scope of the educational program, density of population,

and optimum size of the school. There is no accepted standard, but generally it is felt that in an urban community there should be a minimum of one acre of usable play space for each 80 elementary or 75 junior high or 50 senior high pupils. In suburban areas where land is more plentiful it is suggested that there be a minimum of one acre for each 50 elementary, 40 junior high, and 30 senior high pupils. The trend is definitely toward large sites, Oklahoma City having

acquired recently 640 acres for a high-school plant.

The best recommendation is to acquire as much acreage as considered necessary for present and future needs and then double the amount to allow for still more of the unforeseen. While size is important, it can become secondary to such desirable elements as topography, soil, form, human safety, off-street unloading, parking areas, natural light, cleanliness, quietness, and so forth.

As to building criteria, economically, a cubic foot cost of \$1 may be cheaper than a cost of 80¢ because of the possible difference in non-habitable and habitable spaces. Educationally, a building in which 75 percent of the habitable space is allocated to instruction would certainly appear to be preferable to that in which only 50 percent is so allocated.

Classrooms can be of any size or form because of the building materials and improved design now available. Modular design for use of modular dimensions makes for utility, economy and, potentially, for beauty.

Regarding lighting, it is not a question of how much should we have but how well can we see and how adequate are the means of controlling the quantity and quality. Quality is more important than quantity. Reflected light is better than direct light; hence, the importance of good complementary surfaces. Twenty, 40, or 100 foot-candles of light is not necessarily the answer. Nobody seems to know which lighting is best: unilateral or bilateral or multilateral.

Radiant heating appears to be winning favor, especially in one-story buildings in reasonably consistent climates.

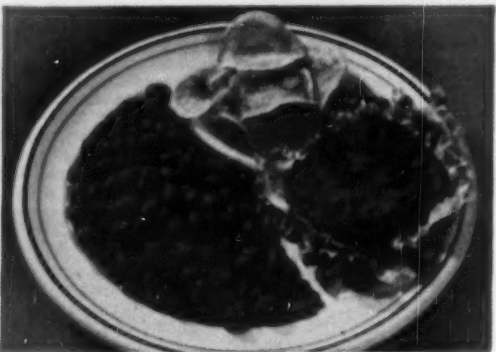
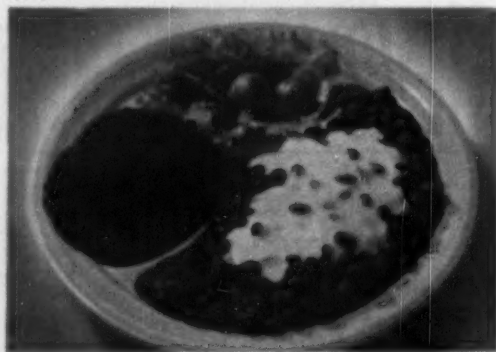
For more facts use Inquiry Card, 5M-134

## Popular Bean Plates Cost Less To Serve!

● Heinz Oven-Baked Beans are really oven-baked and have that home tastin' flavor hungry folks go for! They team up with hamburgers, frankfurters, ham and all kinds of sandwiches for economical, easy-to-serve dishes. In the six popular specials featured here, Heinz Oven-Baked Beans round out a luscious, appetizing meal. Served hot or cold they're full-flavored, hearty, satisfying and nourishing. What's more, these beans are packed in No. 10 tins—ideal for fast, labor-saving service. You can serve these appetizing combinations with no waste from leftovers. Let your Heinz man show you how you can feature Heinz Bean Specials at low cost per portion.

Ask Your Heinz Man About—

**HEINZ** **57** **OVEN-BAKED BEANS**



## New President of AASA



In spite of a \$26,500,000 building project and an enlarged school program for 62,000 pupils, Warren T. White, newly elected AASA president, finds time for civic and professional activity in his job as

superintendent of the Dallas independent school district. He has had 34 years of work in the Texas public schools.

## Bus Body Manufacturers Form Trade Association

**R**EPRESENTATIVES of eight major manufacturers of school bus bodies recently organized an unincorporated voluntary trade association. It will be known as the School Bus Body Manufacturers' Association.

The association plans to contribute in the public interest by assisting in the solution of problems affecting the industry and the general public. Among its other objectives are to promote the development of safety features in school coach bodies; to collect and utilize technical and other information in the field; and to put it to use to aid the industry.

Companies comprising the charter membership are: Blue Bird Body Company, Carpenter Body Works, Inc., Hackney Brothers Body Company, Hicks Body Company, Inc., Onida Products Corporation, Superior Coach Corporation, P. A. Thomas Car Works, Inc., and Ward Body Works, Inc.

First president of the association is John H. Shields, who is also president of Superior Coach Corporation. Vice president is A. L. Luce of the Blue Bird Body Company.

## 135 Billions Are Needed For New Buildings

**I**N the next eight or 10 years we need to erect 500,000 classrooms, according to Ray Hamon of the U. S. Office of Education. And in addition, libraries, health and physical education facilities, lunchrooms, administrative and counseling rooms, service and sanitary facilities, and assembly space to accommodate all the children are required.

One-half million classrooms plus all of the necessary supplementary space and equipment will cost, on the average at present prices, approximately \$27,000 per classroom unit. We are therefore faced with a \$13.5 billion program for public elementary and secondary school plants. This estimate is somewhat higher than previous estimates, because the Bureau of the Census has recently increased its forecasts of school enrollment. Reports from many state departments of education relative to the school plant needs in their respective states indicate that the \$13.5 billion national estimate is not far out of line.

(To build new schools and repair old ones 10 billion dollars in federal funds are sought to house the 45 percent increase in elementary school students. They will increase from 20 to 29 million in the next seven years, according to Willard E. Givens, executive secretary of the NEA.)

There are certain fundamental principles which should be observed in any federal aid program for the planning and construction of public elementary and secondary school plants. They are, according to Mr. Hamon:

1. Administration of the program should be through the U. S. Office of Education and the respective educational agencies of the states.

2. Allotments should be made on a state-wide basis to state educational agencies for their use in assisting local units in accordance with approved over-all state program plans.

3. The federal allotment formula should be based on the needs and relative financial ability of states.

4. Federal-agency activities in relation to the planning and construction of school facilities should be restricted to:

- a. Approval of state program plans as to conformity to federal laws.

- b. General coordination and audit at the state level.

- c. Provision of consultative services upon request of the state educational agencies.

## Why Do We Imitate Georgian, Gothic, or Doric In Our Schools?

**W**HY do we still imitate the Georgian in school buildings with its multiplicity of small windows? That was one question asked by Dr. Walter Gropius, director of the Graduate School of Design at Harvard University, when he spoke to the Rural Education Seminar

at Teachers College, Columbia University.

The 18th century glassmakers couldn't make large windows, stated Dr. Gropius. We can. We are in a position to build walls that can be thrown open, or closed, as we please. We can have two sets of blinds . . . one with warm colors and one with cool colors. Our walls are no longer the sustaining part of our buildings but are sustained parts, hung on steel or concrete skeletons.

We have behind and around us the traditions of the great era of American industrialization. Why is this not worthy of its own architectural style as individualized, as humane, as stately as the Gothic, Romanesque, Georgian, or Doric style?

The basic plan of architecture is over-all masses and open spaces. Dwellings and work places, in modern times, should be within 15-minute walking distance of one another. So far, we have failed to

put basic human needs above economic and industrial requirements in our housing . . . family, farm, and business. Today, we know the mistakes made in the Greenbelt towns, and are in a position to correct them. We realize, too, that the school building used only four or five hours a day is, in this sense, a time-waster for it should be made available to adults in the form of committee rooms, workshops, and discussion centers, stated Dr. Gropius.

For more facts use Inquiry Card, SM-3M



Tomorrow's pioneers of the sky, medicine, industry, statesmanship—future leaders in every field of human

advancement—are riding the nation's school buses today. Their lives—the world's best hopes and dreams for the future—are your responsibility. Only the safest school bus—one that provides maximum, not minimum, protection—is good enough to carry this "priceless cargo."

The new 1950 Superior Pioneer is the safest school bus ever built. Its exclusive all-welded "Unistructure" frame, the world's strongest, has been engineered for even greater strength. Increased vision, more adjustable driver's seat, and more conveniently located controls boost driving safety. And there are many other features that make the new 1950 Superior Pioneer the coach that's first in the field.

See it. Compare its safety, durability, comfort, and beauty with any other bus. You'll agree—the new Superior Pioneer is best qualified to serve as guardian of the future.



## JOE PALOOKA SAYS—

"School bus safety rules are about the same as those for winning a fight."

CHP

Max Fisher, creator of America's No. 1 comic strip hero, has cooperated in providing an attention-compelling poster for your bulletin boards and a handy comic booklet for distribution to your pupils. Joe Palooka's valuable tips make boys and girls feel that it's smart to observe school bus safety rules. Send for these free aids to safety education now!

Please send the following quantities:

POSTERS \_\_\_\_\_ BOOKLETS \_\_\_\_\_

NAME \_\_\_\_\_ TITLE \_\_\_\_\_

SCHOOL \_\_\_\_\_

ROUTE OR STREET \_\_\_\_\_

CITY \_\_\_\_\_

COUNTY \_\_\_\_\_ STATE \_\_\_\_\_

Mail this coupon to Superior Coach Corp., 39 Elby Rd., Lima, Ohio

FOR SAFETY FIRST LOOK TO  
**Superior**

## A School that Won't Become Obsolete

By C. THEODORE LARSON  
Professor of Architecture  
College of Architecture and Design  
University of Michigan

From a talk at the AASA convention

**I**N a world of accelerated change, such as our technological civilization has produced, all buildings are certain eventually to become obsolete. The architect's problem is to anticipate future changes, to allow for them in the original building design, and to offset the ravages of obsolescence so far as possible by arranging for the structure to be periodically "modernized" and thus be kept continuously up-to-date in its performance.

At the University of Michigan we are trying to do this by developing a new-type standardized, low-cost, one-story elementary school building that can be easily adapted to the educational needs of any community in the nation. We also want it to be easily adaptable to any changes in school enrollments or in curriculum requirements that may arise.

### Here's a Progress Report

Our experimental work is still under way. Although any findings must necessarily be considered preliminary and tentative, let me give you a progress report on what we've done so far.

The project is being carried on by the College of Architecture and Design in collaboration with the University's Engineering Research Institute. It is sponsored by Charles W. Attwood, president of the Unistrut Corporation of Wayne, Michigan. Faculty members representing various approaches to the problem—heating, lighting, ventilation, sanitation, acoustics, as well as school planning and structural design—are assisting in the research.

A full-size mock-up model of a typical section of the Unistrut school has already been erected in the laboratory room of the Architecture Building. This mock-up is useful in experimenting with various structural arrangements, including lighting and color.

The unique feature of the Unistrut school lies in the fact that it makes use of a system of steel framing members developed originally for the construction of electrical and mechanical equipment supports, storage racks, jigs, tables, scaffolding, and other heavy-duty items needed in factories and warehouses. Except for a couple of factory buildings at the company's plant in Wayne and an experimental farm building near Chicago, the Unistrut system has not yet been used in the building field. It is one of the principal objectives of the research project to determine just how far the system is applicable to building construction.

### Cuts Construction Time

The steel framing members are bolted together by standard connector pieces very much like an overgrown Mercuro set. Wall panels and floor and roof panels are made of cement asbestos boards or other composition materials which are held by metal battens that simply snap into place on the framing members. No holes of any sort have to be drilled. Pieces come pre-cut to exact size. The whole structure can be erected in short order by two or three workmen using nothing more than a couple of monkey wrenches and a rubber-headed mallet. Cost savings are obtained by cutting down construction time, not by skimping on materials.

Once erected, this school can be enlarged or reduced in size whenever desired by merely adding or subtracting structural parts. It will be entirely possible to dismantle the whole building and reassemble it in another location with very little loss of materials. Conceivably what might start out as a nursery school in one neighborhood could even wind up as part of a new junior high in another section of town.

Dismantability and salvageability are

the architect's chief weapons in the battle against obsolescence. New needs imply new building forms, and to the extent that the same structural parts can be used over and over again there will obviously be a large economy in building costs over a period of time.

This does not mean that we must always think only in terms of temporary school buildings. A comparatively "permanent" structure may sometimes be needed. Since durable materials of good

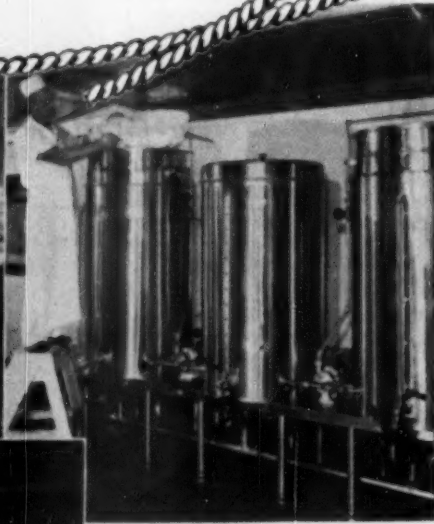
quality are used throughout, a Unistrut school could stand in one location for 50 years or even longer, if so desired.

But neighborhoods have life cycles of their own which very definitely affect the life expectancy of the individual buildings that make up each community. When a neighborhood is new, it is usually occupied by young families with small children. Schools are needed then, but as these children grow up and move away while the parents remain behind,

For more facts use

## VARIETY and VERSATILITY of *GAS* EQUIPMENT Demonstrated in Commissary of U. S. NAVAL HOSPITAL

U. S. Naval Hospital,  
Long Beach, California



Coffee Brewing



Diet Kitchen

Serving





the need steadily diminishes. That is why, of course, in one town after another we find schools in the older areas standing only partly used while in the newer neighborhoods on the suburban outskirts there is a desperate shortage of schools. An elaborate system of bus transportation could perhaps correct this condition in part, but we do not believe such a solution would be as desirable as a system of school buildings so designed and so constructed that they can be

readily remodeled or even moved from one site to another in direct balance with the shifts in urban population.

We are also trying to make the interior space arrangements of the Unistrut school as flexible as possible. By using wall materials in stock widths of 48 inches and allowing an extra inch for the steel framing joint, we get a planning module of exactly 49 inches. For the sake of simplicity in construction, the building width is fixed to give a clear interior span

of 36 feet 5 inches, but the building length can be as great as wished.

Partitions, like the outside walls, are 4 inches thick and can be placed anywhere on the established 49-inch grid pattern. This means, for instance, that corridor widths can be approximately 4 feet, 8 feet, 12 feet, or some other multiple of 49 inches minus the 4 inches of partition thickness. Individual rooms can be as small as 4 feet square or as large as 36 feet 5 inches in width with no limit-

tations at all as to length. Since the partitions are easily taken down and put up again, the room can be varied in size and shape whenever it becomes necessary to accommodate different size classes or any changes in teaching methods.

Outside walls can be all glass or all solid material from floor to ceiling, or they can be made any combination of transparency and opaqueness that may be desired. This is merely a matter of substituting one kind of wall material for another in the various panel openings.

Even though the structural parts are all highly standardized, they can be put together in many different combinations and permutations, entirely at the discretion of the local school district and its architects. In this sense the Unistrut school is itself a Gargantuan kind of gadget—it can be easily adjusted to meet any special local needs.

#### Inquiry Card. SM-6M

Members of the planning and supervisory staff:  
R. F. Christopher, Assistant Commissary Officer  
H. H. Underwood, Steward  
(Lt. A. W. Meyers, Commissary Officer, not pictured)



Stewing and Steaming

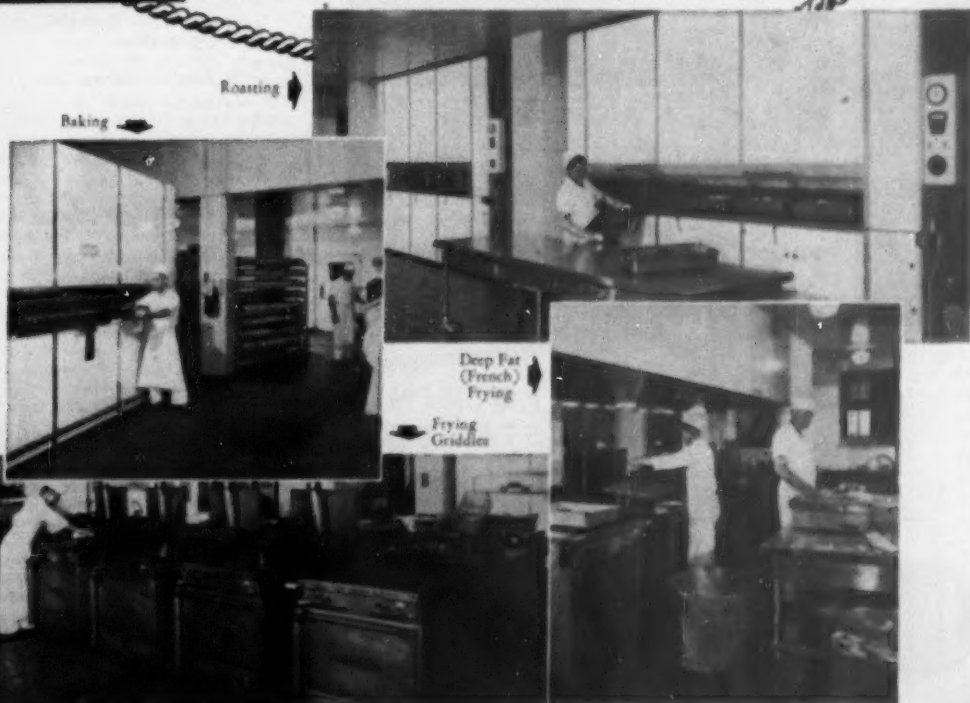
**FOOD SERVICE** is a large-scale operation at U. S. Naval Hospital, Long Beach, California. At the present its facilities provide 4650 meals daily for patients and staff of the 1500-bed hospital. But the galleys and bakeries are capable of serving 16,500 meals, their daily capacity during World War II.

Throughout the hospital galleys, GAS plays a major role in cooking and baking. Virtually every type of modern Gas Equipment is used in the various food departments. Automatic controls are employed to assure maximum fuel efficiency and proper temperature for each cooking and baking operation.

The array of modern Gas Equipment for cooking and baking in this important hospital emphasizes the versatility of GAS for volume food preparation. Your Gas Company Representative will give you full details on any specific application of Gas Cooking or Baking Equipment.

## AMERICAN GAS ASSOCIATION

420 LEXINGTON AVENUE, NEW YORK 17, NEW YORK



#### Photoelectric Light Switches

Classroom lighting is achieved by combining both daylight and artificial light. If daylight coming in through the windows is insufficient or begins to fade, then photoelectrically operated switches will automatically turn on fluorescent or cold cathode tubes in the ceiling. The desired level of illumination will thus always be kept constant and uniform, without special attention by the teacher.

As an up-to-date way of heating the classrooms we propose using electric radiant panels in the ceiling. These panels would go off or on at the flick of a thermostatically controlled switch.

With this type of heating the school ventilation would become a separate system. Air from outside would be brought into a plenum chamber under the floor, filtered, warmed by an electric coil to take off any chilliness, then passed into the classrooms through bane-board openings and on out through the ceiling and attic eaves to the outdoors. Windows would not have to be opened periodically by the teachers in order to get a bit of fresh air, since a superior kind of atmosphere, properly cleaned and treated, would be coming through the classrooms at all times in proper volume and velocity.

#### Wise Refinements

Possibly these ideas on lighting and heating and ventilation may sound like extravagant gadgetry and wholly out of keeping with the concept of low cost schoolhouse construction. We believe this is not the case. The mechanical refinements don't cost much more than equipment requiring manual attention, and there are offsetting economies. For instance, by using the electric radiant heating panels in the ceiling, we eliminate the need for a furnace and a separate furnace room, fuel tanks, ducts, and other paraphernalia. Furthermore, since the heating panels form the actual ceiling surface, they eliminate an equivalent amount of structural material.

It is quite true that electric panel heating is still comparatively expensive, but researches at other institutions indicate that such panels are competitive with conventional household heating systems when power can be obtained at 1½ cents a kilowatt hour or less. As new supplies of electric power become available, the ratio should be better.

Our main defense of the mechanical innovations is simply the fact that they represent a desirable technological advance. Over the long pull they should be less affected by obsolescence than the older traditional items; their future trade-in value should be correspondingly higher. This is a factor that should not be ignored in calculating costs.

**E**XPERIENCE in typing should precede work in shorthand for the greatest development of stenographic skill, according to a study made in the Bound Brook, New Jersey, High School. Ninth-grade English marks and I. Q.'s were also found to be high correlating factors in shorthand success.

Data drawn from the records of pupils who were graduated in June, 1949, showed that about 70 percent of poor shorthand II pupils had poor typing I

grades. The same percentage also had I. Q.'s under 100, and 9 out of 10 students who had grades under 80 in ninth-year English also did poor work in their shorthand II.

These figures show that the study of typing will enable the student to decide whether or not she is qualified to go on with shorthand. It also gives her a chance to utilize her typing skills at the same time that she is transcribing shorthand notes.

**M**ORE than 700 summer education opportunities for teachers and school administrators are described in the "1950 World Guide to Summer Schools and Study Tours." Dates, data on living accommodations, levels of work offered, and availability of workshops, institutes, and off-campus study are among the facts in the guide. Copies are available at 10 cents each from Scholastic Magazines, 7 East 12 Street, New York 3.

## Clever Planning for The Improvement of Plant Operation

By H. M. LINN  
Professor of Education  
Teachers College, Columbia University

From a talk at the AASA Convention

**H**ERE are a number of ideas intended to simplify the work connected with operation of the school plant. Some of them may sound far-fetched at the present stage, but others have already been tested and found worth while.

Let us begin with ways of simplifying floor sweeping. Eliminate raised thresholds under doors on the inside of a school building. This will simplify the custodian's work if he sweeps the soil from the room into the corridor. Few schoolrooms have rugs, so there is little need for a door hung much above the floor level. Of course, some clearance space must be allowed to prevent the door from binding against the floor surface.

### This Simplifies Sweeping

Why not eliminate corner pockets in stairs? Poured concrete or terrazzo can be rounded in the stair corners to simplify sweeping. I have seen small, curved triangular metal plates that are pounded into corners with a rounded tool. The serrated edges of the plates are intended to bite into adjacent surfaces to hold the plate in position. Perhaps some mastic material can be molded into the corners for a neat appearance.

The wainscot in corridors often gets marked by pupils passing close to the walls. A salt-glazed or enameled tile or a brick wainscot generally can be cleaned rather easily, does not require frequent repainting, and is less subject to marring than most other types of building material. Glazed or enameled brick or tile at the bottom of a wall forms a better type of baseboard than wood. The brick or tile can be cleaned more easily, and does not have to be repainted periodically; it may be obtained with a cove shape at the bottom to simplify cleaning. Terrazzo, or even concrete, can be molded to provide the same condition.

### To Reduce Cleaning Time

It is common practice to provide a mat well about 1/2 inch deep just on the inside of entrances, so the door mat is flush with the floor surface. The soil from shoes drops between the links of these mats and may be brushed up at the end of the day after lifting the mat out of the depression. Why not make the depression much deeper, perhaps a foot or more? Then place a sturdy removable grill over it either flush with the floor surface or recessed slightly, so a standard mat may be dropped over the grill. A cavity of this depth would not have to be cleaned out as often as a shallow mat well.

Many schools are now equipped with radiant or panel heating. Why can't the engineers design their system so that steam or hot-water pipes are imbedded in exterior steps and sidewalks? Then during a snowfall, the snow or ice can be melted. If it works satisfactorily, perhaps such a system can be used for driveways or hard-surfaced playgrounds, also.

In many schools the custodians spend much time setting up or removing chairs in the combination gymnasium-auditorium. In some cases the work involves tables used for lunch service. In planning new buildings with such multipurpose facilities, thought should be given to the installation of the jackknife type of fold-

For more facts use Inquiry Card. 8M-7M

**An Important Name  
To Remember.....**

**NATIONAL  
LOCK**

**for MORE VALUE  
in Combination  
Self-Locking  
SHACKLE LOCKS**



### FREE SAMPLE

WRITE US ON YOUR SCHOOL LETTERHEAD

For real dollar-for-dollar value, you'll find it impossible to equal these quality-made, long-lasting, thoroughly-dependable products of NATIONAL LOCK. In them you get double steel construction, heavy duty shackle, easy-to-read dial and other real features. Try a free sample. Convince yourself.

**NATIONAL  
LOCK  
COMPANY**

ROCKFORD, ILLINOIS • LOCK DIVISION

SEE GROUP  
1000-1000-0000  
QUARTS AND  
HARDY BRIDES

For more facts use Inquiry Card. 8M-8M

## Now you CAN ADD SEATING CAPACITY Economically!

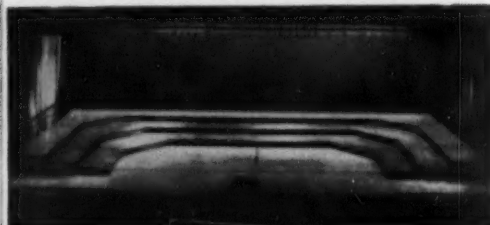
Plan new additional grandstands with factory-built, low-cost Kerrigan Steel Sections. These permanent grandstands can be easily erected to fit your existing stands (see photo). Many schools have effected great savings by erecting Kerrigan Sections themselves. For complete information,

Write for Catalog 13-E today

**Weldforged** GRANDSTAND DIVISION, DEPT. 4

**KERRIGAN IRON WORKS, Inc.**  
NASHVILLE TENNESSEE

For more facts use Inquiry Card. 8M-9M



**for BAND  
ORCHESTRA  
CHORAL &  
DRAMATIC  
GROUPS**

**Mitchell FOLDING  
• PORTABLE • STANDS**

### IMPROVE APPEARANCE AND PERFORMANCE

Add "Audience Appeal", assure better acoustics; better discipline; better direction. 3 or 4 elevations available. Sturdy, safe, easy to handle units with tubular steel folding legs... rigid when set up. Complete stand as shown in above pictures stores in a space 4' wide, 8' long and 6' high. You buy only as many units as you need to fit your requirements.

WRITE FOR COMPLETE INFORMATION

**MITCHELL MFG. COMPANY**  
2730 S. 34TH STREET • MILWAUKEE, WIS.

ing tables and benches which can be built into walls. This type of folding equipment may save the custodian a great deal of time that now is spent handling individual chairs and tables.

Perhaps the cleaning of windows can be simplified by proper planning of a new building. There are reversible window sash on the market that can be turned around completely, so that both sides of the glass can be washed from the inside of the building. Some projected windows can be installed with adjustable panels that permit the cleaner to stand on the inside of the room and reach exterior glass panels through openings. (If men have to clean windows by standing on exterior sills, safety belts should be anchored to permit the cleaner to use a safety belt.)

Why do so many school buildings have so many small panes of glass per sash? Where glass breakage is an item, the smaller panes reduce the repair cost. However, there are many communities where window glass breakage occurs near the playgrounds, but not on the lawn sides of the school. Screens over windows on the playground side may reduce the amount of damage. I am not convinced that small panes, which are hard to clean, must be the general rule.

#### Nonbreakable Materials?

There are nonbreakable transparent materials on the market that may prove to be superior to glass, although the price at this time is rather high. Even then, in some cases such material may prove to be cheaper than glass where the record of glass breakage is disproportionately high.

Dusting can be simplified somewhat if we eliminate much of the fancy molding on interiors. Do we really need picture molding installed all around the perimeter of a room? Isn't it possible that a few short strips of recessed or imbedded picture molding at strategic points will be sufficient? Why install a chair rail in areas where loose chairs are not placed against the walls?

Wood window sills often deteriorate rather rapidly and present a problem in dusting. Masonry sills of slate, tile, or glazed brick may be cleaned more easily and usually require less repair.

Why have a number of small panes of glass in interior doors? Glass breakage is not common, so why not use a single piece of glass? Better yet, why not have a round pane of glass in the interior doors to simplify the frequent wiping of this area? Corners require more time for cleaning.

#### Polishing Takes Time

Speaking of doors, why have so much fancy hardware to keep polished? Why do we not have more door pulls in schools, rather than latches and locks, especially where door closers are installed? And why not all flush doors? They are much easier to clean than paneled doors.

Why do we have so many locks and keys to cabinets and cases and desks? It has been my observation that teachers generally do not lock up much equipment, and when they do they either leave the keys in the locks or place them in an unlocked drawer where anyone bent on mischief can get them without much trouble. No doubt some storage space in the classroom should be placed under lock and key, but I think we often go to needless expense. For use on exterior doors, there are so-called pickproof locks which will frustrate those who wish to enter the building surreptitiously.

There is a coordinator on the market designed especially for the double door,

one leaf of which has an astragal attached to cover the crevice between them. This door coordinator is a clever two-prong device which, when properly installed and adjusted, keeps the leaf with the astragal from closing completely until the other leaf has first gone into position.

Chalkboard erasers, resting on the bed of a flat chalk trough, tend to pick up loose chalk dust and present a cleaning problem. Removable screens placed slightly above the bottom of the chalk trough

will remedy this condition to a limited extent.

Custodial quarters and facilities should be given proper consideration in the planning of new school buildings. There should be adequate space for a repair shop and storage, conveniently located for service and for the moving of furniture and equipment. A special receiving room on the first floor level should be included in buildings of substantial size.

Spacious custodial sink and storage

closets should be located on each floor level. Both hot and cold water should be provided. A single faucet is acceptable, and should permit the attachment of a standard hose. It should be high enough above the sink to permit a bucket to be placed under it. A floor drain is desirable. And by all means, build in a number of shelves, *not just one.*

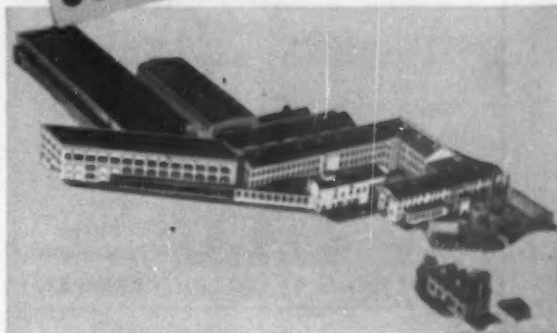
Rubbish chutes can be installed from the upper floor levels to the basement where the waste materials can be col-

For more facts use Inquiry Card. 8M-16M



# Oneida Safety SCHOOL BUS BODIES

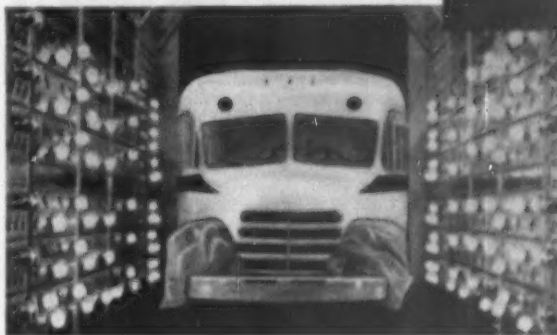
## CUSTOM QUALITY at Mass Production Prices!



Oneida Safety School Bus Bodies gained *immediate acceptance\** from School Boards throughout the country because of the outstanding safety features incorporated in their design. Across the country they are turning in performance records for greater "on-the-road" economy with more miles per maintenance dollar. At the left, Oneida's big, modern body plant.

*\*An Oneida Safety School Bus Body was on the first complete school bus to meet or exceed, in every detail, the new National School Bus Standards adopted by the National Education Association.*

Famed for safety, comfort and durability, Oneida Safety School Bus Bodies are being specified in increasing numbers by School Boards to give children the safest protection modern engineering can provide and to give taxpayers the greatest security for their dollars invested. At the right, five final assembly lines are geared to meet the demand for Oneida school bus bodies—added assurance of prompt, regular deliveries.



Giant infra-red bake ovens are temperature controlled to maintain uniform quality. The attractive, durable finish on Oneida bodies is baked from the inside out—from the metal to the finish coat—for extra long wear. Ranging in capacities from 16 to 66 passengers, Oneida Safety School Bus Bodies are available to meet the specific requirements of individual School Boards. Get the added safety, comfort and durability that distinguish Oneida design—specify Oneida always! Write us today for all the reasons why Oneida is your safest buy.

EVERY FEATURE A SAFETY FEATURE...

SCHOOL BUS  
SALES DIVISION

Oneida Products Corporation  
CANASTOTA, NEW YORK





## Planning for Improvement of Plant Operation

(Continued from page 13)

lected for disposal; or the chutes may be directly connected with an incinerator.

I recently visited a school where the toilet stall partitions were built up of enameled tile about four feet high above the floor level. There were no doors on the stalls. The walls were tiled up to the ceiling. The window sash was of aluminum. At the close of the school day,

after removing the waste paper container, the custodian attached a hose to a hot-water bibb and drenched all fixtures and surfaces. Then he wiped off wash bowls and toilet seats, and mopped up the floor. I don't know that I can approve this method of cleaning entirely, but the enameled tile toilet partitions may have a point. It is pertinent to point out the

desirability of the hose connection and a floor drain in toilet rooms generally.

The use of flushometers for the flushing of urinals is not proving entirely satisfactory since so few persons manipulate the hand control of the flushometers. This is quite understandable. The automatic siphoning device for flushing urinals has merit, but unless the water supply is turned off at the end of the day there is a great waste of water at night and over week ends. A separate water line

to the urinals could be diverted from a convenient central point near the custodian's headquarters to simplify the shut-off control, but this would involve some expense. There are automatic timing clock devices on the market now that control the flow of water to urinals. Isn't it possible that some slightly elevated platform arrangement or metal plate could be installed immediately in front of the urinals which would automatically trip a flushometer after a person has stepped away from the urinal?

Handwashing fixtures in schools generally consist of a battery of standard wash bowls installed side by side. Why not install a single wash trough with a number of individual faucets for handwashing? Since the vast majority of pupils wash their hands in a stream of running water, there is no need of a stopper to fill a bowl. Indeed, few plugs and stoppers are ever found in working order, owing to the mischievous tendencies of school children. A single wash trough is much simpler to clean than a battery of standard wash bowls.

### Wall-Hung Bowls

Wall-hung wash bowls or troughs, which does not require legs for support, simplify floor cleaning. Likewise, wall-hung toilet bowls simplify floor cleaning. However, vandalism operates against the use of wall-hung fixtures in some schools.

Liquid soap containers in washrooms should have ample capacity. Since washrooms often are stacked one above the other in multistory buildings, it should be possible to install a large container—of 10 or 15 gallons—on the top story level to feed all soap valves for that group of rooms through a pipe. This would reduce the custodian's work in filling containers.

The cleaning of lighting fixtures is a chore that can often be simplified. Arrangements should be made for the dropping of lights from high ceilings, such as those in auditoriums and gymnasiums, so that lamps may be replaced or fixtures cleaned at the floor level. Cables and winches may be required. Some stair wells have high ceiling lights awkwardly arranged for cleaning and relamping. Would not side wall lights at lower levels be satisfactory for some stair wells? Three-way light switches should be installed in stair wells and long corridors to help simplify the job of turning out the lights.

Fluorescent light fixtures are presenting new cleaning problems. There is an advantage in having removable egg-crate louvers that can be taken down and dipped in a cleaning and rinsing solution. I hope to live to see the time when fluorescent powders added to wall paint will become a source of illumination. I believe this has been demonstrated already in the laboratory.

### Clock Systems

Master, program and secondary clocks can now be installed in buildings without requiring interconnecting wiring. There are also wireless intercommunicating systems on the market that may serve limited local needs of a school. In a new building it may be wise to install a call going to signal different individuals, including the school custodian.

There is a considerable amount of automatic control equipment designed for heating plants and systems. Controls of several types for regulating the maximum temperature of water, the temperatures within classrooms, and the admission of fresh air into spaces are available. There are clock devices designed to start oil furnaces, coal stokers, or forced draft in the morning before custodians report for

For more facts use Inquiry Card. 8M-11M

Dial new  
locker combinations  
in 15 seconds  
or less



New  
master-keyed  
S-540  
DUDLEY LOCK

Yes, you can change the combination of this built-in S-540 lock as easily as you dial a telephone... in only a few seconds... compared with the 10 to 15 minutes required with any other lock.

Specify S-540 for all your new lockers... and start replacing with S-540 on your present lockers.

S-540 is self-locking, has the patented Dudley cylinder, of advanced pin-tumbler design, in a die cast case.

This unique Dudley key  
means extra security

The Dudley Master Key is patented, can't be duplicated on commercial key making machines. Keys can be obtained only from Dudley after absolute proof of authority.



New  
master-keyed  
P-570  
DUDLEY PADLOCK

Precision-built P-570 has a dependable, 3-tumbler mechanism in a rugged case of cast aluminum. The extra heavy shackle is 1/2" steel, chromium plated. Forty dial divisions in black on satin finish aluminum.



All Dudley Locks are guaranteed for two years. Write for Catalog folder with complete details on the Dudley Line of combination locks, with or without master key.

**DUDLEY LOCK CORPORATION**

570 West Monroe Street, Dept. 511 Chicago 6, Illinois

For more facts use Inquiry Card. 8M-12M

The KENT "Fast Cleaning Team"  
Keeps your floors up... and your costs down!

- KENT Floor Machine
- KENT Electric Mopper

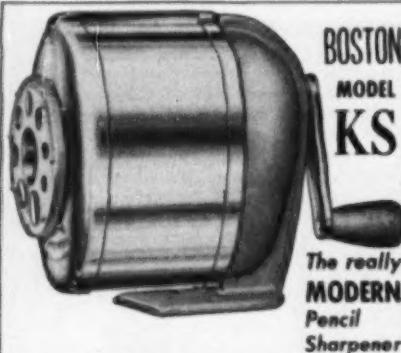


The KENT Floor Machine scrubs your floors thoroughly, quickly... the KENT Electric Mopper picks up the dirty scrub water immediately... floors dry almost instantly! KENT Floor Machine also steel-wools, polishes... KENT Electric Mopper converts to dry vacuum use! Write for further information to:

CLEAN WITH **KENT** EQUIPMENT

The KENT Company, Inc. • 407 Canal St. • Rome, N.Y.

For more facts use Inquiry Card. 8M-13M



**BOSTON  
MODEL  
KS**

The really  
MODERN  
Pencil  
Sharpener

Now get the many special features of the BOSTON KS in a new, all-metal design. Nickel-plated receptacle, heavier stand, dial selector for 8 pencil sizes—plus the famous BOSTON twin-milling 15-edge cutters.

C. HOWARD HUNT PEN CO., Camden, N. J.

Also manufacturers of Speedball Pens and products... Hunt Pens

WRITE FOR FREE  
CATALOG



Says Mr. Speed Cutler: "See how cutting edges make them last longer!"

Backed by a Full Year's Guarantee

**BOSTON  
PENCIL SHARPENERS**

work. Such devices are not foolproof, but they are being used in many places with apparent success.

There are coal stokers so designed that the coal bin serves as a huge hopper, requiring limited coal handling on the part of the fireman. Usually this is not practical for a large heating plant where a great deal of tonnage is handled. Where bins are separated from the stoker hopper by some distance, a coal trolley carried on a monorail and emptied directly into the hopper will save much labor. The capacity of existing stoker hoppers may be increased by welding an extension on the sides to raise the height.

Gas-fired furnaces or oil-burning equipment generally require less time for firing than coal-fired furnaces and, therefore, may prove to be a good investment.

When locating boilers, place them far enough away from walls so that tubes may be cleaned or replaced with a reasonable degree of convenience.

Heating mains should be arranged so that parts of the building used after school hours may be heated independently. Provide gates at strategic points so parts of the building can be shut off for special occasions.

In regions where school lawns have to be sprinkled frequently, it might be profitable to bury water lines, with properly spaced pop-up valves, a few inches below the turf. The sprinkling could then be set or shut off by turning a single control valve.

## Do Our Schools Attempt Too Much?

(Continued from page 3)

with attempts to integrate the characters of the poor little devils and nurse them into social and spiritual maturity—and failing at that too. The parents, lulled into a sense of security, have largely abdicated; the schools cannot take over . . . many school people are puffed up with the sense of imagined omnipotence . . .

In an address before the Department of Superintendence of the NEA in 1935 the distinguished historian, Charles A. Beard, deplored the tendency to overload the schools: "The teacher is not a physician, a nurse, a soldier, a policeman, a politician, a businessman, a farmer, or an industrial worker. These officers have their rights and duties, but the rights and duties of the teacher's office are marked by special features. The teacher's principal business is the training of minds and the dissemination of knowledge . . . If the primary function of the public schools is the training of minds and the dissemination of knowledge that is useful to individuals and society, then the teacher cannot be firewarden, policeman, soldier, and politician combined. On the contrary the teacher is another kind of person, with other duties and responsibilities—the duty and responsibility of the scholar . . ."

Now, according to a recent responsible critic, the schools offer courses in everything short of "how to come in out of the rain." And he adds that current educational writings sound as if they had been badly translated from the German. He says that the training and certification of teachers had become so complicated and intricate that "Socrates himself would find it extremely difficult to be certified."

Whatever the causes of the inflation or "proliferation" of the curriculum it certainly appears that the function of the teacher today is too often that of the lawyer, clergyman, nurse, policeman, banker, fireman, census taker, tax lister, uplifter, propagandist, specialist on soil erosion, hookworm, cattle tick, hog chol-

era, auto driving, venereal diseases, the tariff, unemployment, and international relations.

Often under modern pedagogical dogmas, children of tender age are plunged into superficial studies of "community resources," and they and their parents are probably led to believe that these young people can solve economic, social, political, and racial problems which the wisest men of the past have failed to solve, and which too few of our teachers

are able to solve or instruct children in solving.

Obviously the need is urgent that parents and the home and family become more fully aware than they are now of their own educational responsibilities. Whether they have abdicated and are in retreat, or whether the schools have assumed responsibilities they cannot meet without neglecting those they should first perform, is a very vital issue in American education today.

If, as predicted, at least one thousand local groups of citizens of the National Citizens Commission for the Public Schools will soon be studying and trying to do something about the "sad state of affairs," perhaps we may look for closer cooperation between the public and professors of education and the state agencies that certify teachers. This will be to the advantage of all concerned, and especially to the children and the taxpayers.

For more facts use Inquiry Card, 8M-14M

# 3 lessons you can learn from every NEW SCHOOLMASTER



6-183 (GVW 19,500 pounds)—one of the 5 new Schoolmaster models in International's complete new school bus line—carries as many as 32 pupils safely and comfortably. Photographed near the Sedona School in Arizona's picturesque Oak Creek Canyon.

**You'll have no trouble making the right school bus choice if you keep this in mind: Every single new International Schoolmaster bus is HEAVY-DUTY ENGINEERED for extra safety, economy, and dependability.**

Here's what this means:

### Heavy-Duty Engineered for extra safety

The heavy-duty engineered stamina of every Schoolmaster model means extra margins of safety in the frame, springs, axles, clutch, brakes—in each and every part. In addition, every Schoolmaster offers a better close-up view of the road, easier-to-read instrument panel, safer steering, and greater maneuverability.

### Heavy-Duty Engineered for extra economy

New Schoolmasters are in a class of their own when it comes to thrifty performance. New International valve-in-head engines, carefully matched to Schoolmaster requirements, give your school bus budget a

real break. And just wait till you find out how much less you pay for maintenance!

### Heavy-Duty Engineered for extra dependability

New Schoolmasters build up outstanding "attendance records." They have heavy-duty engineered strength throughout that enables them to stay on the job day after day, year after year. This assures you the outstanding dependability you need to maintain exact schedules and to build high attendance.

Let us show you how new International Schoolmasters can help you put your school bus operation on a safer, thrifter basis. Get in touch with your nearest International Truck Dealer or Branch.

International Harvester Builds  
McCormick Farm Equipment and Farmall Tractors  
Motor Trucks . . . Industrial Power  
Refrigerators and Freezers



Tune in James Melton and "Harvest of Stars"  
NBC, Sunday afternoons

# INTERNATIONAL SCHOOL BUSES

INTERNATIONAL HARVESTER COMPANY • CHICAGO



# SCHOOL LUNCHROOM DEPARTMENT



By MARY FARNAM  
Editor, School Management's School Lunch and Cafeteria Department,  
and Director of School Cafeterias,  
Cleveland Heights

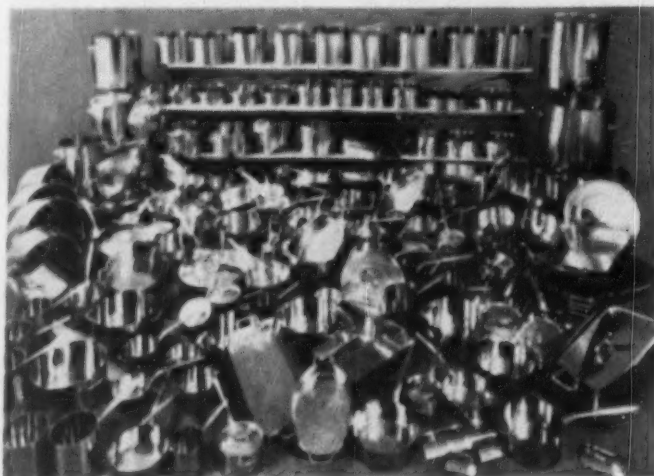
As we near the end of another school year, we approach the time when we take stock of our physical equipment. Plans should be formulated to replace worn-out equipment and to buy our additional equipment. Or perhaps our lists are all made and ready, but must wait until the budget permits the spending of the money to pay for the equipment. In any case, between now and the opening of school in the fall is an excellent time to review needs and to gather together new information on the latest equipment available.

We are accustomed to take for granted the utensils we buy. Each type of material used in their manufacture has certain individual qualities which make it particularly suitable for various different uses in food preparation and service. Kitchen utensils are made from aluminum, cast iron, copper, earthenware, glass, porcelain enamel, plastics, stainless steel, tin, and wood. Some items are made of only one material while others are to be found in several different materials.

There are so many variable factors which enter into the wisest choice when selecting kitchen utensils that it becomes almost an individual problem. Major considerations are: material, construction, quality, quantity, price, and size, which includes lifting weight. Ease of handling, ease of use, ease of cleaning, the expected length of time the utensil will last, the number to be fed, and type of service are also important. Space required while in use, storage between usage, frequency of use, and the multiple uses for which any one utensil can be utilized are factors. With the emphasis on saving time and motion and, as an end result, the number of man-hours used, there is wisdom in selecting utensils for multiple use.

When the utensil in which the food is cooked is used for service, only one pan instead of two needs to be washed. For example, it is economical to purchase pans in which food can be cooked in the steamer or oven and transferred in the same pan to the hot food table. Using individual baking dishes that can be transferred to the serving counter saves time and effort of dishing up the food, and prevents giving the food a messy appearance through removal from one pan to another. For our service, we have found that smaller and shallower pans are more satisfactory than the large deep pans and food table insets which sometimes are sold as a part of the food table.

The best quality is always the most economical. When the budget is small it is better to buy a few well-chosen utensils to meet basic and immediate needs. Then add to these items when more money becomes available. Make a list of all the equipment you would like to buy if you had the money, and then carefully



Many variable factors enter into the selection of the best kitchen utensils to suit individual needs . . . Republic Steel photograph

## HOW TO SELECT YOUR KITCHEN UTENSILS

You will need to consider material, construction, quality, quantity, price, and size

weigh the advantages of making the final selection of what you can afford to buy now.

Some historians say earthenware or pottery bowls were the first utensils. All through the years man has used his ingenuity and imagination, urged on by actual need, to improve the things he used. The results are shown in the utensils we know and use today. Our museums depict the story of this progress in their displays of the utensils used in the past ages.

Now to discuss the various types of utensils:

**1. Aluminum.** Aluminum is one of the most abundant metallic elements found in the crust of the earth. Approximately eight percent of the surface is aluminum. Unlike many other metals, aluminum is only found combined with other elements. Every clay bank and practically all the common rocks contain aluminum in varying amounts. Plants in their normal growth absorb tiny amounts of various minerals from the soil, and aluminum is most always one of them. The animals which furnish an important part of our diet absorb aluminum from the forage they eat. It is interesting to learn that wheat flour,

apples, raw carrots, green lettuce, and cabbage contain very small amounts of aluminum.

Even in this educated and enlightened age we still hear people asking if it is safe to cook food in aluminum. It is absolutely safe and always has been. Within the span of 100 years the price of aluminum has dropped from \$90 a pound to as low as 20¢. Aluminum is the lightest of all materials used for the manufacture of cooking utensils, though, of course, there are several grades and weights available. As a conductor of heat, it is only surpassed by silver, copper, and gold.

It never rusts and is easily kept clean. I asked the representative of a well-known company the best way to clean aluminum. He replied, "Don't let it get dirty." By this he meant preventive care, such as not overheating, not smoking up the outside with too high a flame from an incorrectly adjusted burner, not plunging a hot utensil into cold water, not allowing food to burn in a kettle, and never allowing it to boil dry. This advice, of course, applies to the care and cleaning of all utensils regardless of the material from which they are made.

Since aluminum in its pure form is a

soft metal, it needs to be combined with various alloys to give it greater strength and to prevent bending and warping. There are two types of aluminum cooking utensils—those made from cast aluminum, and those made or drawn from thick sheet aluminum. Cast aluminum utensils are made by pouring molten metal into molds. The first cast aluminum pans had a rough or hammered appearance. However, today it is possible to buy cast aluminum utensils in smooth finishes.

For stamped aluminum utensils, aluminum ingots are rolled into sheets, producing an extra hardness and density. After rolling, the sheets are cut into various size "circles" and then formed into the desired shapes under pressure as great as 1,300 pounds. Thus there are no seams, each utensil being one continuous piece of metal. There are three grades or weights of aluminum cooking utensils—light, semi-heavy, and heavy. These terms indicate the actual thickness of the metal sheet. Of course the thickness affects the purchase price. These utensils are available in two finishes, natural and aluminite oxide.

**2. Cast Iron.** Cast iron, used since the earliest days of the manufacture of cooking utensils, still maintains its popularity and usefulness for certain cooking processes. It is relatively inexpensive and very durable, but is heavy and porous. Consider the weight if you have women cooks who will have to lift these utensils. Cast iron holds heat well and is a fairly good conductor of heat. Dutch ovens, skillets, and griddles are the most popular items in cast iron.

This ware has a decided advantage in the preparation of certain foods requiring long, slow cooking. The thick cast iron stores up a great amount of heat and is good for frying, pot-roasting, and braising. Cast iron utensils give many years of service and require very little care. Cast iron practically never needs scouring and is said to improve with use. It should be washed clean, rinsed well, wiped thoroughly dry, and then placed in a moderately warm stove to dry before storing. Modern cast iron utensils are pre-seasoned at the factory to prevent rusting.

**3. Copper.** Copper has been used for cooking utensils since earliest times because it is one of the metals found in the pure or free state. It is an excellent heat conductor. The Egyptians used copper utensils thousands of years ago, as did the North American Indians. Copper, however, requires almost constant care because it discolors from heat of cooking and exposure to air, and it corrodes easily. Today a few copper utensils are made lined with tin or chromium to prevent stain and corrosion of the copper. If the lining wears thin or corrodes, it must be replated. Copper is more practical for household than institutional use.

**4. Earthenware.** Earthenware utensils for use in large-quantity cooking are usually confined to individual casseroles or baking dishes, since it is not practical to use earthenware for top-of-the-stove cooking. Earthenware is also used for mixing bowls, but as the size increases the weight makes the utensils heavy and bulky. It is easy to wash and keep clean.



But once the glass is broken on earthenware it is not sanitary to use, since dirt, bacteria, and even flavors of food are absorbed.

**5. Glass.** Glass for cooking and preparation utensils is more widely used in the home than in large food service kitchens. Glass utensils are easily washed with soap and water, followed by complete rinsing. Abrasives and metal scouring pads should be avoided since the surface of the glass may be scratched. Flameware should be used over moderate top-stove heat, and, of course, never allowed to boil dry. Flameware, which must be hand-blown instead of pressed into molds, can withstand twice as great heat as can oven glass. Glass utensils absorb heat, thereby conserving cooking heat. Food continues to cook in glass even after it is removed from the fire. Glass utensils most used for quantity cookery are cups, pie pans, coffee makers, and small size utensils for top-of-the-stove use.

**6. Porcelain Enamel.** The art of porcelain enameling was first introduced about 1830 in Europe. Porcelain enameled ware is a special quality of glass fused onto metal, resulting in a smooth non-porous surface. It thus combines the purity of enamel with the strength of steel. The grade of steel used is commonly known as carbon steel and is manufactured expressly for the enamel ware industry. The quality and grade of the finished product depends on the weight and quality of the materials used. The highest quality porcelain enameled utensils are those which have been made to have the same coefficients of expansion as the steel base.

The advantages of porcelain enameled ware are its non-porous finish which cannot absorb food particles or juices, its durability because the finish is fused on metal, and its excellent heat conducting quality because of the combination of glass and steel used in its manufacture.

Do not strike the edge of a porcelain enameled utensil with a metal spoon, nor use metal spoons or other instruments to clean the surface by scraping. The service given and the life of enamel ware of course depend on the care with which it is handled. Soap and water are the best cleaning agents. If any food is dried on or stuck to the surface, it is best to allow the utensil to soak a few minutes before trying to clean it.

**7. Stainless Steel.** Stainless steel made its bow to the industrial world more than a quarter of a century ago. It received quick acceptance in practically every branch of modern industry because of its high corrosion-resistance and other characteristics which contributed to lower costs, higher quality, and more efficient service. There is a wide range of types of stainless steel, but the type used for cooking utensils is known as the 18-8 type. It is an alloy composed of steel, 18 percent chromium, and 8 percent nickel. The lustrous finish is permanent because stainless steel is solid. There is no applied surface that can wear off.

Since stainless steel itself is a poor conductor of heat, a characteristic which resulted in "hot spots" and heat stains, manufacturers have overcome this difficulty in various ways. One method is to use solid stainless steel with an electrolytic deposit of copper for heat transfer. Another method is to use a 50 percent carbon steel core, clad on both sides with 25 percent stainless steel. Another method is using an inner copper core sandwiched between two outer layers of regular stainless steel. Another type is manufactured of laminated material which has a core of steel, faced on both sides with thinner layers of stainless steel.

Since stainless steel has twice the strength of ordinary steel utensils, it resists denting to a greater degree and takes rough handling far better than other materials of gauges that are even heavier.

Stainless steel holds heat longer than most other metals. Therefore, food cooked in stainless steel may be kept warm longer without reheating. Stainless steel utensils are fully resistant to all the known food acids, and it is safe

to store food in them without contaminating the food or discoloring it. One of the most important advantages is the ease of cleaning, since simple washing with soap and water followed by rinsing and drying will keep the metal bright.

If it is ever necessary to remove hardened or tightly adhering food deposits by scouring, never use ordinary steel wool or steel brushes as cleaning agents because small particles of the steel may become abraded onto the sur-

face, thus giving a false appearance of rust on the surface. It is said that no one knows how long stainless-steel utensils will last because none has ever completely worn out with normal use.

**8. Tinware.** Tin utensils are really sheet iron or steel which is tin plated. Since the tin-plated material is pliable enough to be shaped with the steel base, the tinning is done while the base metal is still in sheets. The best quality utensils are made with folded corners, and the

For more facts use Inquiry Card, RM-13M

# SERVE MORE MEALS AT LOWER COST!

## Get Garland!



**Leader in Sales!**  
**Leader in Value!**  
**Judged Finest by A.S.I.E.!**



Every inch of a Garland range works for you! In the restaurant range line alone, you choose from four different models the one best suited to your individual needs. And on each model you select the exact arrangement of open grates, hot top and griddle sections that fit your particular job! Result: your chef can work faster without extra effort; and you can serve more and better meals more economically.

And here's further proof of Garland leadership! Garland—and only Garland—won the coveted Merit Award of the American Society of Industrial Engineers!

Best of all, Garland's volume of production—by far the largest in the industry—assures you of down-to-earth prices. Before you buy, it pays to see your Garland dealer and compare!

All Garland units are available in stainless steel and equipped for use with manufactured, natural or L-P gases.

**NATIONAL RESTAURANT WEEK**  
**May 8th to 14th**



**No. 63-B.** Two hot top sections, one open grate section, griddle, broiler and two ovens.

**No. 64-B.** Three hot top sections, two open grate sections with four giant open burners. Two ovens.



# GARLAND\*

**THE TREND IS TO GAS**

FOR ALL  
COMMERCIAL COOKING

**Heavy Duty Ranges • Restaurant Ranges • Broilers • Deep Fat Fryers • Toasters**  
**Roasting Ovens • Griddles • Counter Griddles**

**PRODUCTS OF DETROIT-MICHIGAN STOVE CO., DETROIT 31, MICHIGAN**

\*1960, U. S. PAT. OFF.

## How to Select Your Kitchen Utensils

(Continued from page 17)

top folded over heavy wire to hold the shape. The most heavily coated tinware, "black tin," is made by dipping the base utensil into melted tin. Tinware is light and conducts heat rapidly. Tin is practical for baking utensils but not for top-of-stove cooking since it will melt at this high heat.

Shiny new tin utensils do not hold

heat well, but as the pans darken from use more heat is absorbed and foods baked in them brown better. Therefore, the tarnish should not be scoured from the utensil as this serves as a protective coat. Tin must be thoroughly dried after each use. Rust will develop if tin is allowed to soak in water. If stored unused for any great length of time tin should

be covered with a light coating of unsalted fat or grease. To remove burn-on or adhered food, tin pans may be heated for a few minutes in a mild solution of baking soda and water to loosen the material. When the soft tin coating is scratched or scraped off, exposing the steel base, rust and corrosion result.

9. Wood. Wood for use in utensils is usually confined to chopping bowls or salad bowls. Maple is the wood used.

This brief outline of the construction, manufacture, and the characteristics of the materials of the different kitchen utensils available on the market gives the basic background that influences the quality, price, and performance of the utensils you select.

The material used in this article was furnished through the courtesy and cooperation of several manufacturers. Your own suppliers of kitchen equipment will be glad to help you in the planning and selection of the best equipment to suit your needs.

For more facts use Inquiry Card. SM-16M



## They go Together

Ideal combination anywhere—KYS-ITE Tableware and Serving Trays. But in a school where kids are careless and breakage an ever-present problem, they're perfect!

Perfect because KYS-ITE, the different kind of plastic is mighty, mighty hard to break or even crack or chip. Easier to wash and handle, too. Stacks beautifully . . . cleans easily . . . won't warp or fade even when sterilized in boiling water, for KYS-ITE's color is plastic-deep, not a surface finish.

Let kids be kids. Serve them on KYS-ITE and relax . . . your breakage problem is licked! Mail the coupon today and see why.



**KEYES**  
FIBRE COMPANY, Dept. M-3,  
430 Lexington Ave., New York 17, N. Y.  
Please send us information on  
KYS-ITE Tableware ☐ KYS-ITE Trays ☐

NAME \_\_\_\_\_  
TITLE \_\_\_\_\_  
NAME OF SCHOOL \_\_\_\_\_  
ADDRESS \_\_\_\_\_  
CITY \_\_\_\_\_ ZONE \_\_\_\_\_ STATE \_\_\_\_\_

For more facts use Inquiry Card. SM-17M

### NEW LAWLOR MODEL 12-W HAS ADJUSTABLE HANDLE

With this new streamlined Lawlor, operators can now scrub, wax-polish floors under desks, machines, lockers, etc. Handle can be raised or lowered to any angle within an 80 degree arc. Strongly made in the Lawlor tradition for long, satisfying service.

The Model 12-W is only one of the complete Lawlor line of quality floor maintenance units to take care of any kind and size floor.

Visit our Exhibit, Booth 160, N.E.S.A. Exposition, May 7-10, Stevens Hotel, Chicago

Write for circular about the 12-W and other Lawlor Equipment.

**S. C. LAWLOR CO.** Quality Floor Equipment for 30 Years  
119 N. Aberdeen St., Chicago 7, Ill.

For more facts use Inquiry Card. SM-18M

## Behind on maintenance schedules?



Then put  
**SKIL Belt Sanders**  
to work on  
desks, tables,  
blackboards  
this summer!

SKIL Belt Sander removes old varnish, stains and scratches . . . 10 times faster, easier than slow costly hand sanding. Your own maintenance men (and even inexperienced helpers) can refinish desks and furniture perfectly. Re-surface blackboards quickly, too. SKIL Belt Sander quickly pays for itself . . . brings you actual budget savings year after year. Ask your SKIL Tools Distributor to prove it with an actual demonstration.



SKIL Products are made only by  
**SKILSAW, INC.**  
9033 Bloken Ave., Chicago 30, Illinois  
Factory Branches in Principal Cities  
in Canada  
SKILTOOLS LTD., 44 Portland St., Toronto, Ont.



## NEW CAFETERIA EQUIPMENT

Use the SCHOOL MANAGEMENT coupon on page 29 or the Inquiry Card. Indicate key number of item on which you wish to receive further information.

**Slicing Machine SM-439M**  
New features of the Globe Model 150 Gravity Feed slicing machine include a built-in angle slicer and a rim-touch blade that reduces knife smear and scrap. The broadside Gravity Feed chute gives greater capacity for large flat items. A new safety switch shields the knife every time the motor is turned off.

Machine is finished in hard-baked enamel with a heavy chromium plating on the bright metal parts. All parts that touch food are either porcelain or anodized aluminum. . . . Use the Inquiry Card or write to the Globe Slicing Machine Company, Dept. SM-439M, Stamford, Connecticut.



**Dishwasher SM-436M**  
A solid wall of water is thrown over and between vertically stacked dishes when the Niagara Jr. double-sink dishwasher is used. A power paddle throws the water and washing solution onto the dishes and thus assures rapid and thorough cleaning. Easily visible thermometers indicate temperatures of wash and rinse water at all times. Each tank is heated by gas burners, steam injectors, or heating elements. A swivel faucet and sliding cover contribute to usefulness of unit when it is not serving as dishwasher. It is designed for lunchrooms serving 150 people or less per meal . . . Use the Inquiry Card or write to G. S. Blakeslee & Company, Dept. SM-436M, 1844 South 52 Ave. Chicago 50, Illinois.

**Glass Pitchers SM-438M**  
Handmade glass pitchers for institutional use are available from the Dunbar Glass Corporation. They are light enough to reflect fine quality workmanship, yet strong enough for commercial use. There is a variety of attractive shapes suitable for all types of beverages. You will find that the handles are easy to grip and provide proper leverage. The gracefully formed lips make serving of cold

drinks easy. Surfaces are glistening clean and easy to wash and keep sanitary. Pitchers range in size from 32 to 96 ounces. . . . Use the Inquiry Card or write to Dunbar Glass Corporation, Dept. SM-438M, Dunbar, West Virginia.



**Custard, Ice Cream Freezer SM-435M**  
Yummy!! That's what pupils will say when they buy the custard or ice cream made in this combination freezer. It will make both continuous custard and regular batch ice cream. The automatic dial control is easy to operate. Capacity is up to 30 gallons per hour, but charts show that sales of a few gallons of mix per day may provide attractive monthly profits. . . . Use the Inquiry Card or write to Mills Industries, Incorporated, Dept. SM-435M, 4100 Fullerton Ave. Chicago 39, Illinois.

**Food Mixer SM-440M**  
A full line of institutional food mixers, ranging from a 20-quart bench model through floor models of 60, 80, and 110-quart capacities, has been added to the Colt Autosan line. Modern, streamlined mixers have a heavy cast housing which assures rigid stability. The automotive-type, multiple plate clutch and gear change unit are designed to withstand heavy loads. Oil is used only in the sealed transmission and cannot reach the spindle. Ball bearings are used at all points where the load indicates their need. All standard attachments are available for the machine. . . . Use the Inquiry Card or write to Colt's Manufacturing Company, Dept. SM-440M, 17 Van Dyke Ave. Hartford 15, Connecticut.

**Hot Soup Carrier SM-437M**  
Soups can be prepared early and then kept hot for hours with this new, special AerVoid soup carrier and dispenser, Model No. V. A. 310. It is also useful for distribution of soups prepared in a central kitchen. The 3-gallon carrier has high vacuum insulation. Since it is made of stainless steel, it is easily cleaned and sanitary. Its diameter-to-height proportions facilitate handling. . . . Use the Inquiry Card or write to Vacuum Can Company, Dept. SM-437M, 19 South Hoyne Ave. Chicago 12, Illinois.



**WE** IN the big cities believe that more money must be found to pay better salaries, to have smaller classes, to provide more materials of instruction, and to build a better physical plant for all school districts. So stated Earl A. Dimmick, Pittsburgh school superintendent, recently.

"We believe," he continued, "that the money is available, that people are willing to pay the cost of public education, but

we contend that federal and state taxing powers are far greater than those of the local community. Since the trend is in that direction, large urban centers in all states should be granted a large enough share of revenue so collected that they may avoid the necessity of levying additional taxes after state and federal taxes have been collected on the same objects and for the same services. We believe this to be a sound, businesslike, and equitable position, and in the best inter-

ests of both the schools and the public whom they serve."

**T**HE direct cost of educating New York City's public school children increased by \$19,861,192 during the school year that ended June 30, 1949, reaching a total of \$247,981,154. These figures were released in the annual financial and statistical report of the Board of Education.

The direct costs included textbooks,

library books, salaries, and supplies. Among the costs not included were interest charges, building maintenance, health service, administration, pensions.

In the elementary schools the rise was \$7.95, for a total outlay of \$263.55. Total expenditure per pupil in the junior high schools was \$294.69, an increase of \$14.36. In senior high schools and vocational high schools, costs were \$347.95 and \$407.71, accounting for rises of \$12.99 and \$20.90, respectively.

For more facts use Inquiry Card. SM-19M



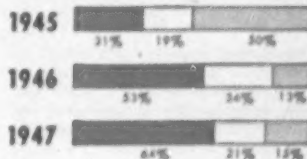
## A bouquet from Junior's mom and dad

Could they be for you—these flowers from a pair of grateful parents? Let's see if you fit the picture. . . .

You are a teacher, or a school nurse, an administrator or home economist—one of many, many thousands throughout the country who saw an urgent need to improve youngsters' eating habits. You decided to tackle the job. You fitted the study of nutrition into your already tight schedule—found new ways to make it absorbing. You brought the problem to the community and you inspired action. Patiently and purposefully, you succeeded in awakening in your children a lively interest in foods. No wonder you deserve flowers!

We at General Mills have been proud of the opportunity you've given us to work with you in this important area. We have tried to help by providing you with suggestions and materials and by acting as a clearing house for passing along the many wonderful ideas that come from you. We'd like to work with you again during the coming school year, and during the years that follow, in the hope of making even greater gains in the march toward a healthier America.

### WHAT HAPPENED IN ONE SCHOOL



**KEY**  
GOOD  
FAIR  
POOR

Here is the record of a midwestern school in three consecutive annual surveys of children's eating habits—dating from the introduction of a program of nutrition education. (From "HOW WELL FED ARE OUR CHILDREN?" a report on the eating habits of 29,475 school children compiled by General Mills.)

**General Mills**

Divided into: Breakfast Cereals - Instant Foods - Baked Goods - Canned Foods - Dairy Products



Copyright 1949, General Mills, Inc.



## A Superintendent Discusses Aspects of Safety Education

By HEROLD C. MUNT  
General Superintendent of Schools,  
Chicago, Illinois

Condensed from a talk at the  
8th National Safety Congress

**T**HE responsibility of the superintendent of schools in administering the safety program is a job of enlisting and coordinating all available resources. First there must be developed a safety consciousness among the members of the faculty and other school personnel. With such an awareness, their cooperation is assured. Enthusiasm for safe measures is contagious, and the biggest job is in inducing the initial infection!

Not is the cooperation of the community difficult to secure. Parents naturally are interested in those things that promote the welfare of their children. Reports from the school interpreting its safety efforts, plus the evidences of safety teaching apparent in the actions of their children, will soon bring about enthusiastic participation and cooperation in the safety endeavor.

### Aid from Community Groups

The local safety council, the motor club, other community and civic groups may all be counted upon for participation and support. These groups will assist materially in the provision of safety teaching materials which they will prepare themselves or secure from national safety sources. Supplementary help, such as the provision of safety patrol belts, signal flags, raincoats and other accessories, the presentation of awards and prizes in safety contests, recognition of significant school safety records — all these and many other community sponsored projects will intensify interest and stimulate effort in the school's safety education program, once the ball is started rolling, usually by the school itself.

Pupil participation in the safety education program is secured, of course, from all sides. Through preliminary safety teaching, the pupil becomes interested enough to carry the message to his home and the community; through civic interest, the pupil's efforts are spurred to further exemplification of this safety knowledge in the attractive awards and the satisfying recognition offered by the community.

### Safe School Environment

There are, however, still other responsibilities of the superintendent of schools in administering the safety education program. His is, of course, the responsibility of providing and maintaining a safe school environment. The school building itself should be safe—safe in plan, safe in construction, safe in operation. In many cases, old facilities, lacking in safety features, must be utilized for educational purposes. Extreme caution must be exercised to guard against any use which might overtax the faulty structure or otherwise constitute a hazard.

Educational accessories in all school buildings must likewise be safe. Such items as draperies, curtains, and decorations must be flameproof. Fire-resistant finishes should be employed on all wood surfaces; heating plants and boilers must be of approved types and operated only by qualified engineers. Exits, corridors, and stairs must conform to safety standards. Storerooms must be fireproof and, in addition, subject to regular and fre-

quent inspection against carelessness. Plumbing must be adequate and functioning properly at all times; electric wiring, connections, outlets and equipment must be approved and regularly inspected. Lighting must be adequate to provide acceptable standards of illumination, thereby avoiding those dark spots which cause accidents.

Still another responsibility of the superintendent of schools, in many districts, is for the provision of safe trans-

portation for some of the pupils. Buses or other vehicles which bring students to school from distant points must conform to safety standards and must abide by all safety and traffic regulations.

Within the school again, the superintendent has responsibility for the conduct of fire drills. Frequency, lack of advance notice, orderliness, and speed in emptying the building are the factors to be constantly considered.

Knowledge of first aid is still another

concern. All pupils should have some instruction in this, and certain members of the staff or building personnel should be qualified to administer appropriate first aid if it is needed. Pupils and teachers alike should know who in the building can render first-aid assistance, and there should be a sufficient number of qualified persons so that at least one is always available.

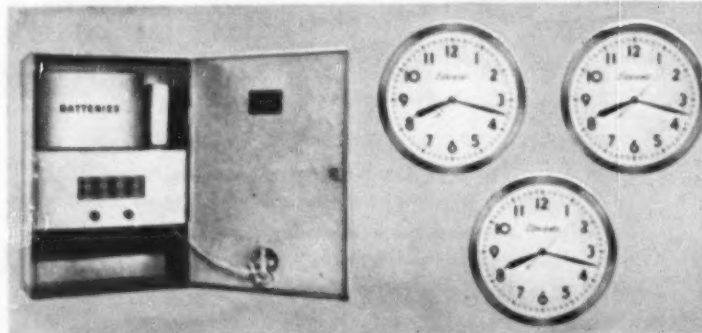
As in all other phases of education, evaluation is an important part of safe-

For more facts use

# WORLD'S MOST ACCURATE CLOCK SYSTEM!



**SPLIT-SECOND ACCURACY** starts here, at the central power station, where perfect AC frequencies are maintained by a Telechron Master Clock... the same type of synchronous motors used in your Edwards Synchronic Clock System to provide absolutely accurate time, *all the time!*



**SIMPLE AUTOMATIC RESET** is a major feature of Edwards' system.

When power is interrupted, batteries keep selected clocks running at correct time. When power returns, dual motors operate remaining clocks at accelerated rate until restored to correct time!

ty education, and all methods of evaluation must be employed to determine the effectiveness of the teaching. Perhaps the most significant means of measuring the real value of the efforts in safety education is the safety record. That surely speaks for itself.

If the number of pupil accidents in the school building, on the playground, en route to and from school is low and is growing consistently smaller, it is evident that a strong and worth-while pro-

gram of safety education is in operation. Such a record, carefully and accurately maintained, provides, further, a readily available analysis of the program, throwing into sharp relief those areas to which attention should be directed.

Classroom and building inspections afford further opportunities for evaluation, and the ratings as recorded on the check lists reveal readily the strong and the weak points in the safety education effort. The home inspection check list

likewise provides some indication of the carry-over of the safety teaching and the responsibility which the individual pupil assumes in the elimination of hazards in his home environment.

Safety concepts must be graded and evaluated through standardized tests and practical application. The "what would you do" type of question affords countless opportunities to estimate the understanding of safety and its practice; multiple choice and true-false tests likewise

can be developed to measure safety knowledge and concepts. These tests may be used as a part of the evaluation procedure in the larger areas of which the safety teaching may be a part, or they may be employed as a separate entity if there is need or desire to measure the results of the safety experiences which have been provided.

It is important to measure the results so that the success of the effort may at all times be known. Only as an outcome of adequate and constant appraisal can attention be properly directed and modifications, adjustments, and emphasis be correctly instituted.

And so, in speaking for safety education, the superintendent of schools speaks for a fundamental part of the total educational program. He speaks, further, for that phase of education as it is carried on throughout the entire school experience of the child, from the kindergarten right through to graduation from high school. The superintendent recognizes that upon the success of the program of safety education in its effect upon the individual student rests the full realization of the objectives of the entire over-all program of education.

### Fine Adults Ahead

SO that each individual may grow into a competent, wholesome, all-round person, teachers, parents, and children are working toward 17 goals, stated in the 1948-49 annual report of the Battle Creek, Michigan, superintendent of schools. These are the goals:

1. Continue to improve in ability to use the 3 R's.
2. Build greater physical health.
3. Be more stable emotionally.
4. Improve in study habits.
5. Be more open-minded.
6. Have more opportunities for work experience.
7. Achieve a deeper understanding of the worth of our natural resources and their intelligent use.
8. Develop a better understanding of problems both at home and abroad.
9. Be better citizens.
10. Have a better understanding of each pupil and his problem.
11. Make better preparation for home-making and parenthood.
12. Better fit the school program to the needs of the individual student.
13. Select and make available materials that are of most use to each student.
14. Plan cooperatively more courses about things that really matter to the learner.
15. Provide for a closer coordination—camp, classroom, farm.
16. Give older youth an opportunity for further education—grades 13 and 14.
17. Provide adequate school housing.

UP-TO-DATE information about current news and its relation to education is offered by a new weekly news service provided by the Collegiate Press Service, 10 East 23rd Street, New York City. Information is for both high schools and colleges, and is useful for counseling, for student reference, as background data for both administration and faculty, and as bulletin board material. Enrollments, housing, expansion plans, faculty and student activities, trends, and job opportunities are discussed in this newsletter-type publication.

Subscription to CPS includes not only the weekly reports, but aid to subscribers as a central headquarters for answering questions, tracking down special problems, and giving further information about its stories.

Inquiry Card. SM-29M



### NO COSTLY SERVICE CALLS LIKE THESE!

Edwards Synchronomatic Clock Systems are the simplest, surest ever designed to meet modern timing needs. No master clocks, rectifiers, relays, radio tubes to service or replace. No

mercury pendulums requiring semi-annual adjustment. Small wonder Edwards Clock Systems operate year-in and year-out without servicing or parts replacements.

NEXT TIME the question of a school clock system comes up, visit your central power station.

Here, where your time is "manufactured" with split-second accuracy, note that the vital job of keeping alternating current frequencies on the nose every minute of every hour is entrusted only to a Telechron Master Clock!

Significant, then, is the fact that Edwards Synchronomatic Clocks employ the same type of matchless Telechron synchronous motors! Small wonder no other type of clock system can challenge Edwards for consistent, correction-free accuracy!

Equally important to you... this accuracy is achieved with unequalled simplicity! No master clocks, no temperamental electronic devices, no delicate pendulums requiring servicing and regulation. Over the years, a service call on an Edwards Clock System is the exception, never the rule.

Complete literature will be supplied on request.

### Edwards Scientific Engineering

The masterly precision evidenced in Edwards Program Clock Systems is a product of 78 years of pioneering research and engineering progress. This experience has been applied with equal success to the perfection of such other vital school equipment as Edwards Fire Alarm and Communication Systems.



### "18 YEARS WITHOUT A SERVICE CALL!"

From R. L. F. Biesemeier, Supervising Engineer of the New Trier Township High School, Winnetka, Ill., comes this report:

"In the 18 years since our first Telechron-powered synchronous clock and program system was installed we have never called for a serviceman."

"Based on our experience, we recommend Edwards Telechron-powered Clock and Program Systems without reservation."

EDWARDS COMPANY, INC., NORWALK, CONN.  
In Canada: Edwards of Canada, Ltd.

# EDWARDS

## Synchronomatic CLOCK SYSTEMS

*accurate to the second...every second!*

**D**r. Clayton D. Hutchins was recently appointed as specialist for school finance in the Division of School Administration, Office of Education.

Since 1945 Dr. Hutchins has been assistant director of the research division of the NEA. In this capacity he spent the major part of his time in studies in the field of school finance. From 1942 to 1945 he served in the Office of Defense Transportation as chief of the school bus section. Prior to that he was

auditor in chief for the Ohio State Department of Education, a position which corresponded to the director of finance in most state departments of education.

**T**HE American Cancer Society has launched "Operation—School Room" to take integrated cancer education programs to students in every secondary school in the country. The NEA and the U. S. Office of Education are co-operating in the program.

A new pamphlet, "Teaching About Cancer—Thoughts for School Administrators," has been mailed to principals and administrators of secondary schools all over the country. An introductory folder, "Why Learn About Cancer?" is directed at the students themselves. Cancer Society education leaders will also conduct meetings with secondary school representatives to adapt new cancer education methods to school curricula.

## How One School Board Is Building Better Public Relations

By **GEORGE M. DAVIS, Jr.**  
Past President, Board of Education  
New Rochelle, New York

**I**N New Rochelle, a city of 60,000, fine relations are maintained between the board of education and the press. Don't think this came about in a haphazard way. It was deliberately and carefully cultivated by the board.

Public relations in the past had been left mostly to school administrators. While they did an admirable job at interpreting the schools, the public generally is suspicious of the professional educator. It feels the educator has an axe to grind and may want publicity for personal gain or prestige.

Several years ago the school board members, after thoroughly considering the various important angles of public relations, concluded that this was really their responsibility. They were established in the community and would be listened to since they wanted no personal gain. And, invested with the power of trusteeship, the members owed the citizens an intelligent interpretation of and explanation of school affairs.

### Rules of Conduct

To meet this responsibility and to assure cooperation of the press, the following rules were decided upon:

1. All meetings would be open to the public. There would be no executive sessions or private gatherings which the public was not permitted to attend. The only two subjects the citizens would not be allowed to discuss or give opinions about at meetings were personalities and the purchase of property. The press is present at these meetings.

2. The friendship of the press would be cultivated. Members would be invited to all meetings, and committee and executive sessions. They would be kept well-informed about every bit of business being transacted, so that they might give an able interpretation to the public.

3. Individual board members would take an active part in this program since it inspires confidence if the public sees and hears its representatives. Public visitations would include such school affairs as commencements, concerts, and plays. At any general or special school project some member would be present to explain the project and to answer questions. The schools would be taken to the public through demonstrations, exhibits, and musical activities, with board members assisting where needed.

### More Newspaper Space

The press immediately expressed its confidence in the board's action by attending meetings and capably and honestly informing the public. There has been an increase in space allotted to educational matters in the local newspaper. In 1944 there were 146.3 pages of school information; in 1945, 154.1; 1946, 149.7 pages; 1947, 138.7; 1948, 162.5; and in 1949, 180.8 pages.

This year a weekly newspaper column is prepared by different board members. They may write on any phase of education or the school program they see fit.

Very satisfying is the new attitude on the part of the citizens of New Rochelle. They feel much more a part of the schools, and in understanding them better desire to support them. Budgetary problems are considerably easier now. And there is no question that because of this public understanding and appreciation the schools have been greatly benefited.

## ...ONE OF THE BEST WAYS TO LOWER OPERATION COSTS—

is to eliminate unnecessary food waste by serving meals that are consistently flavorful. Today hundreds of institutions are depending upon economical Maggi's Granulated Bouillon Cubes to bring new appetizing goodness to their soups, stews, gravies and the many other dishes that call for meat stock. Try adding several tablespoons of this flavor-rich Maggi's Granulated Bouillon to all your everyday recipes—also remember, it makes a delicious instant-quick "broth".

### 2 OTHER MAGGI FLAVOR FAVORITES

- ★ Maggi's Seasoning
- ★ Maggi's Gravy Powder, Chef Style

## BRINGS FLAVOR TO BUDGET MENUS!



## MAGGI'S Granulated BOUILLON CUBES



The Nestlé Company, Inc., 165 East 44th St., New York 17, N. Y.

For more facts use Inquiry Card. 8M-31M

For more facts use Inquiry Card. 8M-31M

## ATLAS Floormaster



**DOES ANY JOB FASTER**

FLOORMASTERS for dependable service always... famous for patented construction features that assure easier, faster operation at lowest upkeep cost always. No servicing troubles. SIZES TO MEET EVERY NEED!

Write for name of  
Nearest Distributor

Write for  
Folder 8M-5

Territories Available for Distributors

ATLAS FLOOR SURFACING MACHINERY CORP.

248 East 34th Street, New York 16, N. Y.

## Cut Your Floor Cleaning Time 25% to 50%

with one of these wringers



Geerpres Mop Wringers  
do this because:

1. One operation of the handle extracts more water than 2 operations with other wringers.
2. Geerpres wringers squeeze mops drier.
3. Wringing with Geerpres means uniformly dry mops.
4. Geerpres outfits can carry 50 to 100% more water for the same size wringer.
5. Geerpres wringers leave no rings on the floor since splash-over is virtually eliminated.
6. Hotter Water can be used where floors can take it.
7. Geerpres wringers do not tear mop strings loose.

Shown: No. 2436 Outfit Complete

Ask for  
Catalog No. 946.

... A Geerpres wrings everything but the stick!

**GEERPRES WRINGER, INC.**

Manufacturers of High Grade Mopping Equipment

P. O. Box 608

Rockford, Michigan



## What Factors Make School Bond Campaigns Successful?

**P**ROPER presentation of all the facts is considered the most important success factor in one out of every two bond issue campaigns, reports *Ohio Schools*.

The Ohio Education Association found that much previous opposition and lack of support on local issues was because voters did not understand what the issues were all about.

A "positive selling approach" stresses the benefits which the issues bring to the community and the children. Selling arguments are factual and specific. In bond issue campaigns, voters are shown floor plans and architects' visualizations of new buildings. Comparison tables show how a school system's financial support rates with the state average, with communities of comparable size, and with neighboring communities.

In many communities, citizen committees make the house-to-house contacts, operate the speakers' bureau, produce the campaign materials, and secure the endorsements of various community organizations. Well informed students answer the questions of their parents and neighbors, too.

PTA assistance is particularly valuable in house-to-house contact work and in "getting out the vote" on election days.

The OEA analyzed 1948 campaigns which reflected significant trends. It found that more than 96 percent of them were successful. Superintendents attributed this success to:

1. Adequate presentation of all the facts.
2. PTA "support," particularly in house-to-house work.
3. Endorsements of lay groups.
4. Continuing community relations programs.
5. Citizens committees.
6. Informed students.
7. Good organization and planning.
8. Letters to parents and residents.
9. Contacts with community and group leaders.
10. Community pride.

## On the Calendar

National Music Week, May 7-14.  
National Conference on Citizenship, Washington, D. C. May 22-24.

Building Service Supervisors and Employees Course, Teachers College, Columbia University, New York, June 5-9.

School Custodians' Conference, Purdue University, Lafayette, Indiana, June 12-14.

Mount Holyoke Institute on the United Nations, South Hadley, Massachusetts, June 25-July 22.

NEA Commission on Teacher Education and Professional Standards, Indiana University, Bloomington, June 28-July 1. Subject is "Standards for Teacher Education Institutions."

Elementary School Principals, St. Louis, July 2-7.

National Education Association, St. Louis, July 2-7.

National Audio-Visual Association, Chicago, July 30-August 2.

Association of School Business Officials, Hotel Sherran, Chicago, September 25-28.

County and Rural Area Superintendents of Schools, Columbus, Ohio, October 9-11.

American Education Week, November 5-11.

School Food Service Association, Muehlenbach Hotel, Kansas City, Missouri, November 8-10.

**D**URING the last 30 years the number of one-teacher schools has been decreased by 90 percent or more in Indiana, Maryland, Ohio, and Washington, reports W. H. Gaumnitz, specialist in small and rural high schools, at the Office of Education. The following states have reduced one-room schools in that period by less than one in three: Illinois, Nebraska, North Dakota, South Dakota, and Wisconsin.

Since 1916, Mr. Gaumnitz states,

throughout the nation one-room school-houses have decreased from 200,000 to less than 80,000, a reduction of about 60 percent.

But even with all this advance, 45 percent of our schools are of the one-teacher type. In terms of children, nearly one and a half million still attend these one-teacher schools. Kentucky and Illinois lead in this category since they have more than 100,000 pupils attending these units. Iowa has more than 90,000, and

Minnesota, Missouri, and Wisconsin each report more than 80,000 children in these schools.

**P**ARENTS in Garden City, New York, are so enthusiastic over the publication, *Wishin' Our Schools*, that the board of education has voted an extra appropriation for it. This attractive, highly readable, eight-page news sheet is sent to all taxpayers several times a year. Its editor is John Orban, Jr.

For more facts use Inquiry Card, RM-23M



## CHEVROLET School Bus Chassis

Chevrolet Advance-Design school bus chassis are engineered with *safety* the first consideration. They are built to *last*—to stand up dependably under adverse road and weather conditions! Their sturdy construction and rugged strength—plus superior economy and roadability have, year after year, put them at the head of their class. And again for 1950 Chevrolet's extra margin of reserve power, new improved engines,

positive braking and ease of control rank these hardy school bus chassis top favorites for safety first to last! For full details, consult your Chevrolet dealer today.

CHEVROLET MOTOR DIVISION, General Motors Corporation, DETROIT 2, MICHIGAN



## SCHOOL BUS CHASSIS

### 199-INCH WHEELBASE SCHOOL BUS CHASSIS

Gross vehicle weight, 13,500 or 15,000 pounds depending on tire equipment. Capacities, 42 to 54 pupils. Chevrolet Load-Master valve-in-head engine, 105 h.p., 193 foot-pounds torque (pulling power) at speeds governed under 33 m.p.h.

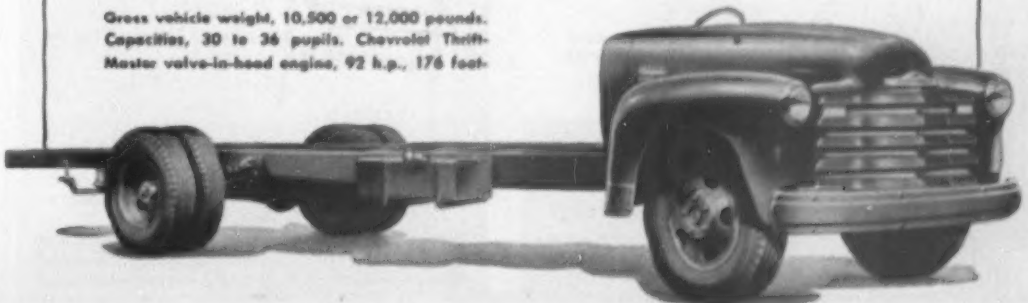
### 161-INCH WHEELBASE SCHOOL BUS CHASSIS

Gross vehicle weight, 10,500 or 12,000 pounds. Capacities, 30 to 36 pupils. Chevrolet Thrift-Master valve-in-head engine, 92 h.p., 176 foot-

pounds torque (pulling power) under 33 m.p.h. governed speed.

### 137-INCH JUNIOR SCHOOL BUS CHASSIS

Gross vehicle weight, 7600 pounds. Chevrolet Thrift-Master valve-in-head engine, 92 h.p., 176 foot-pounds torque (pulling power) under 33 m.p.h. Capacity, 16 pupils.



**T**HE United States can safely spend 30 times as much for education during the next 100 years as it is spending now. This is the verdict of Brookings Institution, a Washington agency famous for cautious research. Brookings concluded expenses for health can rise 30 times, for recreation 33 times, reports *Educator's Washington Dispatch*.

Our entire economy can be one of super-abundance during the coming century—barring war or criminal waste of re-

sources. Sources of electric power are yet untapped. Coal reserves can last a thousand years. New farming methods will conserve soil, increase food. Electronics will carry the major load of home and factory work. The economy which Brookings predicts will be able to foot a \$90-billion-bill a year for education by 2050 A.D.

**T**HERE is a distinct need for alert, philosophical, administrative leader-

ship in education. There is a tendency for administrators to become involved in routine at the expense of concern with the basic fundamental problems of education. There is a constant buffeting by doctrines and pressure groups. Unless there is a definite stand, based on well grounded, sound principles of pedagogy, we shall be following—not leading—in the educational field. —Earl J. McGrath, United States Commissioner of Education.

## How One Rural County Raised Funds for a Building Program

By A. CLINTON LOY, Superintendent Hampshire County Schools, Romney, West Virginia

**T**HINGS are looking up for the school-age children of Hampshire County, West Virginia. The future promises them better school buildings.

Few people now living in the county can recall when any new schools were built, with the exception of the high school in Romney, the county seat, erected in 1930, enlarged in 1948; and the four-room elementary school and high-school addition at Capon Bridge last year.

The county covers nearly 642 square miles and has a population of nearly 13,000. Most of the citizens engage in farming, fruit growing, and stock raising. Total valuations of the county top 15 million dollars, which is probably less than half of the true value. There are 2,690 pupils in the 42 schools, and 1,781 are transported to school in 29 busses. Total school expenditure per pupil was \$152.38.

When I came to Hampshire County as superintendent in 1935 there were 60 one-room schools. Now there are 26, and very soon this number will be reduced to 9. We accomplished the reduction from 60 to 26 by transporting the children to the 14 larger schools. This was possible without too much crowding.

We needed new buildings badly, but only by practicing the strictest economy had we done the little construction mentioned earlier. Last spring after school was out I called a dozen meetings throughout the county, writing a personal invitation to the patrons and announcing the meetings in the county papers.

At the meetings we talked of our educational needs, the cost of the county school program, how much taxpayers of the county were contributing, how better facilities could be provided, what buildings would cost, how a program could

For more facts use Inquiry Card. RM-24M



## Do More Work In Less Time with BAKER SCAFFOLDS

Building maintenance, repair work and general housekeeping represent one of your major expenses. Like others, you too will find the Baker Scaffold one of your most important labor and money saving pieces of equipment for off-the-floor work.

Baker Scaffolds are easily handled by one man . . . compact storage, no loose parts, can be carried on standard elevators, rolled through standard doorways and are readily stacked for height and to cover any floor area. No "X-Brace" construction allows them to span desks, tables and furniture so that they can be moved about in occupied areas. Write today for Bulletin 491.

Distributors in Principal Cities  
Listed under Reexamination Service  
Underwriters' Laboratories, Inc.



**BAKER-ROOS, INC.**  
602 W. McCARTY STREET  
INDIANAPOLIS 6, INDIANA

For more facts use Inquiry Card. RM-25M

## DEPENDABLE FLOOR BRUSHES

backed by 35 years of experience



Select materials and expert workmanship are combined in Floor City floor brushes. Available in widths from 12" to 42". Floor City brushes sweep clean and wear longer. Filled with fibre, hair, nylon or Chinese bristles.

## WASHABLE FLOOR AND DUST MOPS

Made of highest quality mop yarn attached to a hardwood block, Floor City floor and dust mops are designed for economical, faster cleaning. The mop can be quickly and easily removed for washing or replacement.



FLOUR CITY BRUSH CO. Minneapolis 15, Minn.  
PACIFIC COAST BRUSH CO. Los Angeles 21, Calif.

For more facts use Inquiry Card. RM-26M

*Enjoy Restful  
Secure Seating*

**CLARIN**

**STEEL FOLDING CHAIRS**

**Durable Steel Construction —**  
**Light enough for easy handling —**  
**Strong enough to support half a ton —**  
**Unusually quiet in handling and use, due to exclusive mechanism and rubber floor contacts —**  
**Grip the floor firmly —**  
**Perfectly balanced against tilting —**  
**Correct posture design assures complete comfort —**  
**Guaranteed for 10 years against breakage —**

No. 247-LL

**CLARIN MFG. CO.**  
4020 St. Albans St., Dept. N-3  
CHICAGO 44, ILL.

There are more steel folding chairs in institutional service than any other make

For more facts use Inquiry Card. RM-27M

## WITH THE GREATEST OF EASE . .

The Cunningham Sickle Bar Mower cuts through heavy grass, brush and weeds with the greatest of ease . . . Whenever large areas must be cleared . . . Ideal for school grounds, golf courses, estates or parks. Economical . . . Dependable . . . 1 1/2-2 H.P. Attachments for rear found vibs. Ask your Cunningham dealer for a free demonstration.



**Cunningham**  
James Cunningham Son & Co., Dept. 21  
Rochester 8, N. Y.

Write for FREE booklet: "Practical Tips on Power Gardening" and "Beautiful Lawns."

For more facts use Inquiry Card. RM-28M

**SCHOOL DOOR PLATES**

**PRINCIPAL**

In Standard Bronze 7 1/2" x 1 1/2" ONLY 75c ea.

Large polished brass letters on deeply etched black ground. Easy to read, durable and dignified in appearance. The each in any quantity. Hundreds of titles for schools. Write for list. A few titles listed below:

1st Grade—2nd Grade—etc. to 10th. 1st-2nd Grade to 7th-8th Grade. Room A—Room B—etc. to Room K. Assembly Room—Auditorium—Boys' Gym—Locker Room—Boys' Shower—Cafeteria—Chemistry—Class Room—Domestic Science—Gymnasium—Girls' Gym—Girls' Locker Room—Exit—English—Gymnasium—Kindergarten—Principal—Private—etc., etc. Immediate shipment. ORDER FROM YOUR SCHOOL SUPPLY DEALER or write:

**THE HOFF METALCRAFT**  
124 So. 4th Street  
Minneapolis 1, Minn.

be financed, how it would affect taxes, and so on.

Before the first meeting adjourned an advisory committee to the county board of education had been named. This committee circulated a petition which asked the board to call a special election to raise funds to build school buildings where they were needed county-wide. The idea caught on at all the other meetings and in two weeks' time approximately 40 people were out soliciting signatures and selling the people on a program for new schools. When the petitions were called in there were 1,165 signers. We made an all-out effort to get a good school-community organization going at every school and at the beginning of the term this year we got our organizations functioning quickly.

#### Program Prepared

We then prepared our program. Since it was pretty largely developed at the meetings it was much in accordance with the requests of the petitioners. It included a 13-room elementary school at Romney, minor additions at each of the two high schools, two four-room, three three-room, and two two-room buildings scattered throughout the county. Four other buildings were to be provided with heating, lighting, water, toilet, and lunch facilities. This proposed program cut our total number of schools to 27 and eliminated all but nine of our one-teacher schools.

The program was to be financed by a \$285,000 bond issue, a \$130,000 special three-year tax levy, and a \$95,000 grant in state aid. Arrangements were also made to transfer any unexpended balance at the end of the school year to the building fund. A provision was also written into the plan making it possible to borrow on the three-year tax levy in order that the two and three-year revenues would be available immediately for buildings.

The necessary state approval was received, the election was advertised, and we proceeded to campaign for the two issues largely among the petitioners and among the school-community organizations.

#### Rumors Notwithstanding

During the campaign rumors were circulated that taxes would be increased \$25 per acre, that certain small businesses would have to pay a thousand dollars per year in taxes, that taxes would be doubled, that the county would go bankrupt. Some few individuals predicted that it would be necessary for them to move out of the county if the issues passed. In spite of all the opposition, when the vote was tallied last December, 1,424 people had voted for the bond issue, and 744 against it. We found the levy also carried 1,192 to 767.

We are proud of the results when we consider that two elections had to be held before a courthouse could be built, and two more elections were required to get \$12,000 in matching funds to build a county office building.

The most valuable knowledge gleaned throughout the whole project was that when we went directly to the people, gave them the facts as their children were affected, we could get what was needed.

Our people feel that they developed the program, that they sold it to the voters, and that they voted it into effect. Why shouldn't they? The schools are theirs and so are the boys and girls. We have discovered a great force in our county. We have put it to work and things are looking up for our boys and girls.

## Facts on School Bus Insurance

**I**N some states part or all of the school buses are owned by private individuals or transportation companies and are used for pupil transportation under contract with school districts. Insurance for this type of school bus has problems of its own, according to Madeline Kinter Remmlein, assistant director of the NEA research division.

Compulsory liability insurance is more

widespread for privately owned school buses than for publicly owned ones, and is required in 34 states. The private owner is the insured and suits can be brought against him if the claims are not settled out of court. Governmental immunity of school districts does not enter into the picture at all.

There are several angles to be considered. For instance, there is the distinction between liability insurance and

accident insurances. Under the former payments are made only when the insured has been negligent.

Another question for consideration is the right of a school district to pay the premiums on an insurance policy insuring school buses owned by private individuals. A district cannot make direct payments to an insurance company for the amount of the insurance premiums required of those operating privately

For more facts use Inquiry Card. SM-28M



## REO...One for All!

**ONE...** The school bus with body and chassis designed and built as one complete unit!

**ONE...** The school bus with service responsibility and performance backed up by one manufacturer!

**ONE...** The school bus that meets or exceeds all safety standards set by The National Education Association!

**ONE...** Recognized from coast to coast as the Number One school bus for safety, long life, reliability, and economical operation!

SAFETY SCHOOL BUS DIVISION

REO MOTORS, INC., LANSING 20, MICHIGAN

**REO**  
SAFETY SCHOOL BUS



## On Bus Insurance

(Continued from page 25)

owned buses without permissive legislation, in Miss Remmlein's opinion. There has been statutory authorization to pay premiums on privately owned buses, but it is not frequent.

Even in states where there is no statutory authority to pay the premiums on insurance covering buses privately owned, it is quite likely that the cost of

the insurance has been considered in setting the contract price. When a private owner agrees to furnish buses for pupil transportation and is required to carry liability insurance, it is only good business for him to include the cost of the insurance in his estimate of the cost of furnishing transportation.

When a school district makes a pupil transportation contract with the private owner of school buses, the contract price may legitimately include the hidden cost

of insurance, although without statutory authority the school district cannot legally make direct payments to an insurance company for the cost of insurance.

**A** CAKE sale conducted by the students of Wayne Junior High School, Mountain View, New Jersey, contributed greatly to the beauty of the campus. The proceeds of this sale were used to buy 500 tulip bulbs!

## JEFF SAYS



Flower cultivation and care in well selected areas pays dividends in public good will. Types of flowers which bloom in summer as well as spring should be grown. Patrons look at the school lawn even when the children are not in attendance.

At Negaunee, Michigan, Joe Sevlock has developed a system of lawn, flower, and shrubbery care which has made a small area at the front and side of his school building one of the places of beauty of his community. Any custodian can develop a small area which will earn him a community reputation as a custodian who takes pride in the beauty of his work.

A word of caution—flowers selected for school ground growth should be less tempting to pick than are tulips, daffodils, or asters. A little color in the school yard attracts attention and interest of the passer-by. Plan the plantings with regard to time of bloom, color, and height of plant. . . .  
*Julius Barbour.*

For more facts use Inquiry Card. SM-3036

For more facts use Inquiry Card. SM-3131

## MEET THIS NEW VERSATILE MEMBER OF A FAMOUS FAMILY



**DURABLE TUBULAR  
DESKS AND CHAIRS**  
provide multiple study  
groups in one room!

Norcor's tubular steel desk and chair set has many unique structural advantages. Straight, rather than tapered legs, provide larger floor contact and better glide. Desk frame, which features a continuous leg stretcher, is welded into one integral unit for strongest, permanent rigidity. Chair frame is also unit welded and features an angle steel seat brace, hook storage type leg stretchers. Polished glides on both units are removable only by use of a tool. Desk in standard heights of 30, 28, 26 and 25 inches. Chairs in seat heights of 15, 13, 17 and 18 inches. Optional steel available. Choice of solid hardwood or curved plywood in Natural or School Brown finish with Brown, Teppo or Beige frames.

Write for catalog of complete seating line.

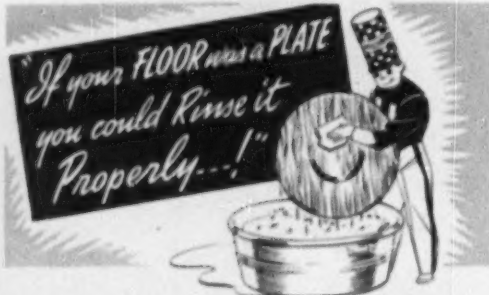
CURVED PLYWOOD

SOLID WOOD

**The NORCOR Line**

SCHOOL FURNITURE • FOLDING CHAIRS • TABLES • CARD TABLE SETS

NORCOR MANUFACTURING CO., INC. • GREEN BAY, WISCONSIN



But since floors CAN'T be rinsed properly—choice of a cleaning agent becomes doubly important to management. For, it isn't traffic that wears out floors . . . it's improper cleaning with harsh scrubbing compounds or soap and water solutions that can't be rinsed properly . . . and that slowly penetrate the pores of the floor causing it to wear out long before it naturally should. That's why management chooses the neutral HILLYARD cleaner.

## SUPER SHINE-ALL REQUIRES NO RINSING

It's a neutral cleaner that chemically dissolves dirt . . . leaves no sticky, gummy film or scum . . . eliminates need for rinsing. Cuts labor costs. U/L approved.



WRITE FOR FULL  
INFORMATION

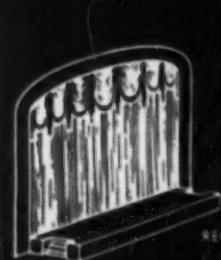
ST. JOSEPH,  
MISSOURI  
U. S. A.



For more facts use Inquiry Card. SM-3231

## Complete STAGE EQUIPMENT

- Proscenium
- Wings
- Stage curtains
- Lighting equipment
- 40 mm. lenses
- Stage trucks
- Stage hardware
- Substage curtains
- Angel systems
- Flyer rigging
- Tractor rigging



20 years of experience manufacturing, installing, and servicing stage equipment for churches, schools and institutional auditoriums.

Planning? Intend buying? Art Craft will be glad to acknowledge your inquiry promptly.

## REQUIREMENTS FOR QUOTATIONS

1. Width and height of proscenium
2. Height from stage floor to ceiling
3. Depth of stage
4. Width on stage

Upon receipt of measurements, samples and price will be mailed when request for descriptive literature, specify on order No. 302

**ART CRAFT**  
**THEATRE EQUIPMENT CO.**  
108 WEST 46th STREET NEW YORK 19, N. Y.

## A New Idea for Summer

**H**OW many teachers would like a rent-free vacation in some part of the United States they've always wanted to see? This opportunity is offered to members of the teaching profession by the Teachers Residence Exchange. School and college instructors who register with the exchange are assisted in locating similarly-situated colleagues who wish to exchange homes for the summer or during a sabbatical leave. California, New York, the southwest, and New England seem to be the sections most popular with teachers seeking rent-free vacations, reports the exchange.

There is a fee of \$2 for listing the teacher's home or apartment, searching the files and matching requirements with those of a similarly-situated family, and sending detailed descriptions of exchange residences. When a satisfactory exchange of residence is effected, there is a charge of \$25 for a period of three months' occupancy or less. Further information about this plan is available from the Teachers Residence Exchange, 100 West 42 St. New York 18, N. Y.

**T**HE value of public school construction for 1950 is expected to reach an increase of 7 percent over 1949.

For more facts use Inquiry Card. SM-3331

**FREE Catalog  
BRONZE TABLETS**

**DESIGNS FOR EVERY NEED**

Write today for free 48-page catalog, 150 designs for solid bronze tablets—see examples, know what you can do. Ask for catalog 5.

**INTERNATIONAL  
BRONZE TABLET CO., INC.** NEW YORK, N. Y.

## How Los Angeles Is Working to Improve Custodian Institutes

**T**O help meet the need for a continuous custodian in-service training program in the Los Angeles schools, occasional institutes have been held, reports Ralph G. Corwin, director of operations there. Some of the experiences and results from these meetings may be valuable to others interested in solving similar problems.

One of the gradual changes made in the training program has been to decrease the number of persons invited and at the same time increase the number of meetings to keep groups small. This was found to be necessary after observing that a large percentage of those persons attending came with the attitude of enjoying a holiday. A meeting of 20 persons has come to be greatly favored over a meeting of 1,500.

### Custodians Teach

The problem of conducting and teaching small institute meetings has been met by using supervising custodians and head custodians to assist on the programs. The responsibility for coordinating the agenda of all meetings has, of necessity, remained with the six field supervisors. Some excellent instruction has been presented by the supervising and head custodians after a small amount of coaching and rehearsing. Follow-up surveys prove that their teaching has obtained good results.

Group and individual participation, which can be permitted in small meetings, has been one of the most valuable results of this program. Custodians, being practical people, learn most rapidly by doing, or by seeing something done. Skits and demonstrations, using members of the group as assistants, have brought out problems and their actual objective solution far better than was ever possible with large audiences.

A wholesome feeling of freedom in asking questions and bringing up individual problems has been happily attained in small meetings. The programs of recent meetings have provided for question and answer periods, instructions regarding rules and regulations, and lessons of various types regarding methods of work, supplies, schedules, techniques of supervision, and so forth.

The results of recent custodian institutes where only head custodians were invited have been the best of all. In these meetings the head custodians were instructed to teach their assistants certain parts of the program. The responsibility delegated here has been carried out with far greater efficiency than was formerly obtained in mass meetings, according to Mr. Corwin.

## Helpful Hints for Those Who Teach — Yawning Is One!

**T**EACHERS who learn to sleep well have better adjusted pupils in their classes than do those who sleep poorly, according to Dr. James Bender, well-known New York psychologist who recently published the results of a six-year study on sleep. He pointed out to those attending a New Jersey Education Association convention that to a greater extent than any other feminine vocational group, school teachers suffer from sleeplessness. The demands on a school teacher's physical energy and emotional control are often so great that they bring on psychic tension and insomnia. Ways to combat this were suggested by Dr. Bender as follows:

1. Maintain smaller classes, particularly in the first six grades.
2. Decorate classrooms in pastel shades, particularly iridescent green, for a soothing effect on the nerves.
3. Use sound absorption materials and devices in schoolrooms and halls.
4. Give courses in how to sleep to all in teachers colleges. Knowledge is available which can increase sleep efficiency at all ages.
5. Reduce number and length of re-

ports and paper-work, so that teachers are not overloaded with homework.

6. Have emotionally well-adjusted principals and department heads. Stern, hard-driving principals or department heads cause insomnia and bad dreams.

7. Stress more social activities or hobbies for teachers. Those whose lives are full of places to go and who have access to company of the opposite sex are happier and have a more refreshing sleep.

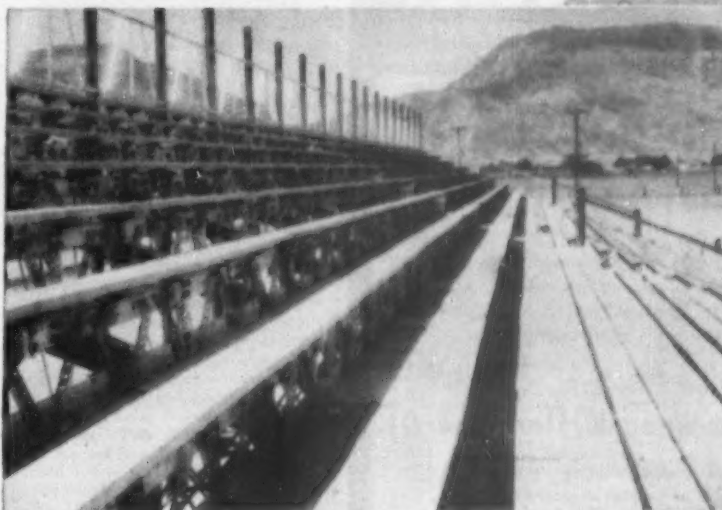
8. Take daily exercise in the fresh air. Dancing is good, tree climbing better! Gymnastics don't serve as well to relax the body for sleep as do those activities which are found more meaningful.

9. Share sorrows so they may decrease; share joys that they may increase. Share them with someone you love more dearly than self.

10. Yawn many times throughout the day. This is relaxing and redistributes the blood supply.

For more facts use Inquiry Card, BS-34M

## For Low-Cost BLEACHERS With "Built-in" SAFETY Features... Use "SAFWALK"



Above: Flanged Walkways and Stairways punched from bottom. Burred holes provide safe, non-slip surface, even when icy. Left: Grandstand made from SAFWALK materials—250 feet long with 20 rows of seats.

## LOW COST • FIREPROOF • EASY TO ERECT • PERMANENT

There are no slips on SAFWALK bleachers. "Built-in" safety on every step and walkway makes for sure footing.

The bridge-type construction of quality steel assures a durable, sturdy structure that holds up under continued use year after year. Won't rot. Completely fireproof. Low maintenance. No special skill is needed to assemble SAFWALK structures. Pre-cut parts fit perfectly. If desired, bleachers can be taken down and moved, quickly and easily. Size can be expanded or decreased.

### For Fire-Escapes, Too!

SAFWALK materials make superb fire-escapes. Power houses, heating plants and shops find SAFWALK outstanding for walkways and loading-racks. Where safety, durability and low-cost are essential, engineers specify SAFWALK.

**BLACK, SIVALLS & BRYSON, INC.**

KANSAS CITY • TULSA • OKLAHOMA CITY

Low-cost SAFWALK bleachers are ideal for fairgrounds, stadiums, ball parks and other places where public gatherings are held. Priced within budget of every town, city, and school.

### FREE CATALOG

Write today for illustrated catalog and prices on SAFWALK materials. Absolutely no obligation to buy.



**BLACK, SIVALLS & BRYSON, INC.**  
720 Delaware, Sec. 1-94-5  
Kansas City 6, Mo.



Please send me without obligation your FREE catalog of SAFWALK materials for bleachers, fire-escapes and other structures.

NAME \_\_\_\_\_ TITLE \_\_\_\_\_

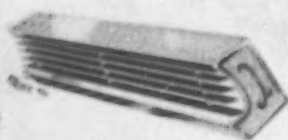
ADDRESS \_\_\_\_\_

CITY \_\_\_\_\_ STATE \_\_\_\_\_

# Check List of SCHOOL SUPPLIES AND EQUIPMENT

**NEW PRODUCTS**  
and news about established products  
presenting the claims  
made for them by their manufacturers

Consult the Coupon Page opposite. Send the Inquiry Card for further information. No charge, no obligation.



## Portable Germicidal Unit SM-416M

The new Majik Ray for classroom installation helps reduce respiratory infections and promote easier breathing. It utilizes G. E. ultraviolet ray germicidal tubes which kill 95 percent or more of the germs in the air through which the ultraviolet ray passes. Your custodian

can install the unit in a classroom without special wiring. . . . Use the Inquiry Card or write to Ultra Violet Research Company, Dept. SM-416M, 1220 North First St. St. Louis 6, Missouri.

## School Photographs SM-419M

Pictures for identification cards, vocational records, annual portraits, and class groups are offered by the National School Studios photographic service. Black-and-white enlargements, sepia hand-colored enlargements, and glossy pictures can be furnished by this company. It specializes in the production of low-cost annuals by lithography.

Photography is done at the school, where a representative arrives on a set

date with a portable studio, lighting equipment, and a camera built especially for school photography. . . . Use the Inquiry Card or write to National School Studios, Inc. Dept. SM-419M, 723 South Seventh St. Minneapolis 15, Minnesota.

## Metal Wall Tile SM-422M

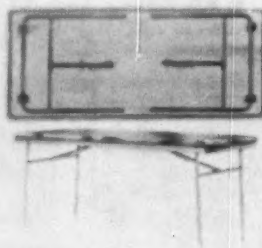
Where smart appearance and cleaning ease are desired for kitchens, lunchrooms, recreations rooms, and many other areas, durable Crown metal wall tile fills the bill. It comes in a range of glowing colors or in stainless steel, in satin or glossy finishes. It has a bonded guarantee against rusting, cracking, crazing, chipping, or peeling. . . . Use the Inquiry Card or write to Ohio Can & Crown Company, Dept. SM-422M, Massillon, O.



## New Cotton Mop SM-406M

Custodians will find the flexible V-Mop especially useful in sweeping under desks and low benches, in hallways, classrooms, and all congested areas. Its dual mop heads operate like a pair of scissors to sweep a path from 6 to 57 inches wide. Sweeping time is reduced, since collection of dirt in the V-shaped pocket formed by the heads allows continuous sweeping without loss of load. Better dust pickup per foot of travel is claimed because mop heads are set diagonally to sweeping path and give greater mop contact with the floor.

The durable V-mop has a lightweight tubular steel construction. Rubber grip handles make it easy to use. Mop comes in 2 sizes. . . . Use the Inquiry Card or write to G. H. Tennant Company, Dept. SM-406M, 2552 North Second St. Minneapolis 11, Minnesota.



## Folding Table SM-405M

Schools will find this an extremely practical table. It comes in sizes which range from 24 x 42 to 36 x 96 inches, and models are available with rounded contours. There is a choice of several different tops, including one of durable Formica. Metal apron is all welded and reinforced.

With its telescopic leg-folding principle and rubber-bumpered apron, this table can be stacked safely and without danger of marring. It is self-locking either open or closed, and has universal joint floor guides. . . . Use the Inquiry Card or write to Royal Metal Manufacturing Company, Dept. SM-405M, 175 N. Michigan, Chicago 1, Illinois.

## Rubber Matting SM-412M

This handy Do-All all-purpose matting can be used as a door mat or as a runner to provide safety underfoot and remove dirt. The low-priced matting is made of new rubber, with strong cords used as a binder. It comes in a 35 x 35-inch unit of four 17-inch-square sections, or in rolls of 2 to 7 units. Four colors are available. . . . Use the Inquiry Card or write to D. W. Maor Company, Dept. SM-412M, 1701 Adams St. Toledo 2, Ohio.



## Floor Edger SM-417M

If your maintenance man does floor resurfacing work with the customary drum-type sander which does not reach right up to baseboards, the new-model Lincoln E-7 twin-motored edger is a necessity for him. It will finish not only the last 1/4-inch strip of flooring, but also other hard-to-get-at places.

Two AC-DC motors, one operating  
(Turn to page 30)

## GET THOSE WEED ROOTS!

GO TO THE ROOT OF YOUR WEED  
PROBLEM WITH THESE DOLGE PRODUCTS



## Dolge SS Weed-Killer

Where no vegetation whatever is desired. Penetrates deep down to plant roots and kills. Sterilizes the soil, preventing normal sprouting of wind-blown seeds. Weeding the thorough, modern chemical way eliminates backbreaking toil and saves the cost of many labor-hours.

## E. W. T. Selective Weed-Killer (2-4-D)

Highly recommended for maintaining the beauty of lawn and fairway. Works its way down into the roots of brush, dandelion, plantain, poison ivy, ragweed, sumac and other obnoxious plants, but does not injure most turf grasses.

Please write for descriptive literature explaining how these tested DOLGE products can best be used for your weeding requirements.

**The C. B. DOLGE Co.**  
WESTPORT, CONNECTICUT

For more facts use Inquiry Card. SM-36M

# THEATRICAL FABRICS by DAZIAN'S INC.

THE WORLD'S OLDEST AND LARGEST THEATRICAL FABRIC ORGANIZATION • ESTABLISHED 1842

FOR STAGE DRAPERIES  
COSTUMES, CURTAINS  
AUDITORIUM DECORATION

FOR INFORMATION OR SAMPLES WRITE OUR OFFICE NEAREST YOU:  
NEW YORK: 142 West 44th Street  
CHICAGO: 125 No. Wabash Avenue  
BOSTON: 400 Boylston Street  
LOS ANGELES: 731 So. Hope Street

WRITE FOR FREE  
BOOKLET "WHAT  
FABRICS CAN DO  
FOR YOUR SHOW"





# LOOK INSIDE A Fuller FLOOR BRUSH

## TO SEE WHY IT SAVES TIME

Get all the refuse with one stroke—no back-tracking. Take a look at the cross-section of the Fuller Floor Brush shown above and you'll see why. The center is a blend of stiff horsehair and selected fiber to give enough body to the brush to move heavy refuse. The outer casing of horsehair takes care of the fine dust. This special blending of materials not only saves sweeping time by eliminating back-tracking, it also causes the brush to wear down evenly regardless of the type of floor.



INDUSTRIAL DIVISION  
**The FULLER BRUSH Co.**

3550 MAIN STREET • HARTFORD 2, CONN.  
In Canada: Fuller Brush Co., Ltd., Hamilton, Ont.

For more facts use Inquiry Card, SM-38M



**BOOK YOUR FALL MOVIES NOW**  
Plan your fall 16mm educational film program NOW—Use your I.C.S. 1949-1950 catalog or write for FREE copy today.

INSTITUTIONAL CINEMA  
SERVICE  
1560 E. Broadway,  
New York 19, N. Y.

## CHECK THESE ITEMS FOR FURTHER INFORMATION

All products described in the editorial and advertising columns of the May issue of **SCHOOL MANAGEMENT** are listed on this

page. Check and return this form or use the Inquiry Card for further information. There's no charge and no obligation for this service.

- Page 2**
- SM-10 Tape recorder & sound movie projector (Deere Camera Co.)

- Page 5**
- SM-20 Encyclopedia (F. C. Compton & Co.)

- Page 7**
- SM-30 Farm & Home Netzer (National Electrical Manufacturers Association)

- Page 8**
- SM-40 Food (H. J. Heinz)

- Page 9**
- SM-50 School buses (Superior Coach Co.)

- Page 10 & 11**
- SM-60 Gas equipment (American Gas Association)

- Page 12**
- SM-70 Shackle locks (National Lock Co.)
  - SM-80 Groundslands (Kerrigan Iron Works)
  - SM-90 Portable folding stands (Mitchell Mfg. Co.)

- Page 13**
- SM-100 School bus bodies (Omaha Products)

- Page 14**
- SM-110 Locks & padlocks (Duffley Lock Co.)
  - SM-120 Floor maintenance (The Kent Co.)
  - SM-130 Pencil sharpeners (C. Howard Hunt Pen Co.)

- Page 15**
- SM-140 School buses (International Harvester Co.)

- Page 17**
- SM-150 Gas rippers & food service equipment (Detroit-Michigan Store Co.)

- Page 18**
- SM-160 Plastic tableware & trays (Kreps Fibre Co.)

- Page 19**
- SM-170 Floor maintenance machine (S. C. Lauer Co.)
  - SM-180 Belt sanders (Salsone, Inc.)
  - SM-190 Slicing machine (Globe)
  - SM-200 Dishwasher (Wabco)
  - SM-210 Priblens (Dunbar Glass)

- Page 20-21**
- SM-220 Synchronous clock systems (Edwards Co., Inc.)

- Page 22**
- SM-230 Floor maintenance machine (Atlas Floor Surfacing Machinery Corp.)
  - SM-240 Map erasers (Georgies Wrasper, Inc.)

- Page 23**
- SM-250 Chevrolet School bus chassis (General Motors Corp.)

- Page 24**
- SM-260 Scaffolds (Water-Rose, Inc.)
  - SM-270 Floor brushes & dust mops (Flour City Brush Co.)
  - SM-280 Steel folding chairs (Clarion Mfg. Co.)
  - SM-290 Wraspers (James Cunningham Son & Co.)
  - SM-300 Doorplates (The Hoff Metalcraft)

- Page 25**
- SM-310 School buses (Rec. Motors)

- Page 26**
- SM-320 Desk & chair (Harver Mfg. Co., Inc.)
  - SM-330 Floor cleaner (Billings Sales)
  - SM-340 Stage equipment (Art Craft Theatre Equip. Co.)
  - SM-350 Tablets & medals (International Bronze Tablet Co., Inc.)

- Page 27**
- SM-360 Blackboards (Black, Swartz & Bryant)

- Page 28**
- SM-370 Word filler (C. B. Balgo Co.)
  - SM-380 Theatrical fabric (Dorian, Inc.)
  - SM-390 Gynecoid unit (Ulfr-Violet Research)
  - SM-400 Photographs (National School)
  - SM-410 Wall tile (Ohio Cer. & Co.)
  - SM-420 Folding table (Royal Metal)
  - SM-430 Rubber matting (G. W. Ward)
  - SM-440 Calfan map (Gannett)
  - SM-450 Floor adaper (Lithco-Schlarfer)

- Page 29**
- SM-370 Industrial brushes (Fuller Brush Co.)
  - SM-380 Educational films (Institutional Cinema Service)

- Page 30**
- SM-390 Key controlled combination locks (Waco Lock Co.)
  - SM-400 Theatrical equipment (Theatre Production Service)
  - SM-410 Chain link fence (Continental Steel Corp.)
  - SM-420 Safety stop (Machinery and Sales)
  - SM-430 Phone (Parker-Cable)
  - SM-440 Auditorium seat (Gripco)
  - SM-450 Cleaner (Eucard)
  - SM-460 Sweeping tool (Walter E. Lopp)
  - SM-470 Hair dryer (National Dryer)

- Page 31**
- SM-420 In-wall folding tables & benches (Schubert Mfg. Co.)
  - SM-430 Portable tables (American Floor Surfacing)
  - SM-440 Lullaby fountain (Hans)
  - SM-450 Soap (Huntington Laboratories)
  - SM-460 Dynamometer set (General Electric)

- Page 32**
- SM-430 Industrial cleaners (General Electric Co.)
  - SM-440 Molass grape enamel (Inertal Co.)
  - SM-450 Wire fences (Atlas Fence Co.)
  - SM-460 Film (Kodak Pictures Service)
  - SM-470 Art equipment (S. Grumbacher)
  - SM-480 Building suite (Flexicare)
  - SM-490 Magazine rack (Rob. Makers)
  - SM-500 Trussing board (Ideal School Supply)
  - SM-510 Desk (American Seating)
  - SM-520 Squeezing unit (Electric Squeeze)

- Page 33**
- SM-480 School bus chassis (Chrysler Corporation—Dodge Division)
  - SM-490 Shower head (Shawn Valve)
  - SM-500 Roasting coils (Ray Emmert)
  - SM-510 Road cones (American Road Tools)
  - SM-520 Playground equipment (American Playground)
  - SM-530 Cleaning (Gelpa-Palmolive-Peet)
  - SM-540 Informing equipment (Exultone)
  - SM-550 General equipment (Adapt. Pack)
  - SM-560 Testing and guidance (Science Research)
  - SM-570 Audio-visual materials (Ideal Pictures)

- Page 34**
- SM-490 Automobile (Santano)
  - SM-500 Folding chairs (American Seating Co.)
  - SM-510 Record player (Synchronic Radio & Electric Corp.)
  - SM-520 Grilles (Cornell Iron)
  - SM-530 Posters (United Nations)
  - SM-540 Felt suspensions (Fox with Felt)
  - SM-550 Pottery cutters (Penas)
  - SM-560 Map tracking (Demper-Goppert)
  - SM-570 Voices of Yesterday (Educational Services)
  - SM-580 Working on the Railroad (Young People's Bureau)
  - SM-590 I Can Hear It Now (Columbia)
  - SM-600 Little Engine That Could (RCA Victor)
  - SM-610 Pinetree (RCA Victor)
  - SM-620 Little Black Sambo (RCA Victor)

- Page 35**
- SM-520 Tape recorder-sound projector (Ampex Corp.)
  - SM-530 Source (Wisconsin Audio Visual)
  - SM-540 Tape recorder (Brush Development)
  - SM-550 Tape recorder (Allied Radio)
  - SM-560 Tape recorder (Empire Office)

- Page 36**
- SM-530 Publishers (Parents' Magazine)
  - SM-540 Publishers (Ocean Publications)
  - SM-550 Source surface (Go-Lite)
  - SM-560 Public Relations for America's Schools (AASA)
  - SM-570 Gynecoid Story (San Diego City-County Civic Commission)
  - SM-580 Educational Law Simplified (Bacon)
  - SM-590 Lay Advisory Committees to Boards of Education (Calif. Assn. of School Administrators)

- Page 37**
- SM-550 Sound conditioning products (Celeston Corp.)
  - SM-560 The People and the Schools of California (Calif. Assn. of School Admins.)
  - SM-570 Learning Electricity and Electronics Experimentally (Scientific Book)
  - SM-580 Sustaining Case Devices (Scientific Book)
  - SM-590 Architectural Drawing for the Building Trades (McGraw-Hill)
  - SM-600 Elements of Diesel Engineering (Norman W. Bentley)
  - SM-610 Organization and Administration of Physical Education (Auplet-Century-Crofts)
  - SM-620 Gertrude's New House (University of Florida)
  - SM-630 Glen Oak Walk (Univ. of Florida)
  - SM-640 Health and Happiness (Univ. of Florida)
  - SM-650 Jack's Secret (Univ. of Florida)
  - SM-660 Sunday Water (Univ. of Florida)
  - SM-670 One Guide (Univ. of Florida)
  - SM-680 Pineville High Beats the Challenge (Univ. of Florida)
  - SM-690 Boldly the Sea (Univ. of Florida)
  - SM-700 Springfield on the March (Univ. of Florida)
  - SM-710 Waters (Univ. of Florida)
  - SM-720 We Will Sing One Song (Univ. of Florida)

- Page 38**
- SM-560 Chain link fences (Cammerford Steel Co.)
  - SM-570 Film treatment (Vassarville Corp.)
  - SM-580 Coat rack equipment (Vogel-Peterson Co.)
  - SM-590 Newspapers, desk & door sign (Ball Sign Co.)
  - SM-600 Story of a South Plug (Bureau of Mines)
  - SM-610 Story of Timbale (Bureau of Mines)
  - SM-620 Handicrafts of Belgium (Films of the Nations)
  - SM-630 Work and Play in Belgium (Films of the Nations)
  - SM-640 Floridian Corollaries (Hoffberg)
  - SM-650 Busy Spots in Florida (Hoffberg)
  - SM-660 Heavy Metals (A. F. Films)
  - SM-670 Chicago (World in Color)
  - SM-680 Chicago National History Museum (World in Color)
  - SM-690 Bicycling Safety Today (Bicycle Institute)
  - SM-700 Your Movie Camera and How to Use It (Bailey)
  - SM-710 Green Gold (Motion Picture Service)
  - SM-720 An Industrial Lakeside (United World)
  - SM-730 Craftsmanship in Clay (Educational Film)
  - SM-740 The National Gallery of Art (National Gallery of Art)
  - SM-750 Bob Gaffney, Fisherman's Helper (Frick)
  - SM-760 Bob Lyons about Ocean Trade (Frick)

- Page 39**
- SM-600 Motion picture equipment (Bell & Howell)
  - SM-610 What Makes Things Float? (Institutional)
  - SM-620 Screen Magazine No. 1 (United Nations)
  - SM-630 Screen Magazine No. 2 (United Nations)
  - SM-640 Birds of a Southern Pine (Southern Polymers Conservation Assn.)
  - SM-650 Filmstrip and Other Pictorial Material (British Information Services)
  - SM-660 Official Film Catalog (Official Films)
  - SM-670 Allied Independent Producers Combined 1950 Catalog (Allied Independent Producers)
  - SM-680 Guide to Art Films (American Federation of Arts)
  - SM-690 A. F. Film Catalog (American Film Registry)
  - SM-700 Westinghouse Motion Pictures for School Use (Westinghouse Electric)

- Page 40**
- SM-610 Sound projector (Radio Corp. of America)

Mail to: Readers' Service Bureau, School Management, 80 Vandorville Ave., New York 17, N. Y.

Please send me information on the items I have checked above

Other product information wanted:

NAME \_\_\_\_\_ POSITION \_\_\_\_\_

SCHOOL SYSTEM \_\_\_\_\_

STREET ADDRESS \_\_\_\_\_

CITY \_\_\_\_\_ STATE \_\_\_\_\_

5-50

## Check List of SCHOOL SUPPLIES AND EQUIPMENT

(Continued from page 28)

Use the SCHOOL MANAGEMENT coupon on page 29 or the Inquiry Card. Indicate key number of item on which you wish to receive further information.

the sanding disc and the other the dust pickup fan, assure efficient vacuum action regardless of load on sander. There are hand-removable sanding discs. Adjustable casters permit machine to cope with uneven floors. . . Use the Inquiry Card or write to Lincoln-Schluter Floor Machinery Company, Dept. SM-417M, 1250 West Van Buren St. Chicago 7, Illinois.

### Safety Step

Maintenance men can make good use of the new Add-A-Step which provides a platform on which both feet can rest firmly. It can be quickly adjusted to any style or size ladder without the aid of tools. A safety lock which fits over the rail of the ladder guarantees safety and stability. This sturdy device is factory tested to carry 500 pounds. . . Use the

### SM-430M

Inquiry Card or write to the Machinery and Sales Equipment Company, Dept. SM-430M, 626 Broadway, Cincinnati, Ohio.

### Power Plane

### SM-415M

For use in woodworking jobs, carpentry, and cabinet making, Porter-Cable makes the new Guild Plane, Model 101. It operates at a speed of 20,000 r.p.m., assuring a fast, clean cut and leaving a smooth, waveless surface. It has a maximum cutting width of 1-13/16 inches, allowing its use in construction from outside doors through to finish trim. An adjustable apron permits bevel cuts from 0 to 25



degrees. The 8-pound plane is easy to handle in any position. Its AC-DC interchangeable motor can be transferred to the Guild Router to save the cost of an additional motor. . . Use the Inquiry Card or write to Porter-Cable Machine Company, Dept. SM-415M, Syracuse 8, New York.



### Auditorium Seat

### SM-411M

Doesn't this miss look comfortable in the new 30-line upholstered chair? And when she stands, the self-rising seat will automatically fold to its "up" position. This is important to schools, since it enables quick passage down the rows in case of emergency. It also simplifies the sweeping work of the custodian.

Seat is upholstered in du Pont's Fabrilite, a fire-resistant, washable, noncracking, nonfading, vinyl plastic-coated fabric. Center standards of this auditorium seat are of solid steel with no openings between chairs. Front and back edges are tubular; there are no sharp corners. . . Use the Inquiry Card or write to Griggs Equipment Company, Dept. SM-411M, Belton, Texas.

### Disinfectant Cleaner

### SM-403M

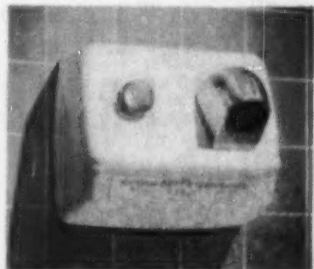
Useful in washrooms, public areas, and lunchrooms is the new nonpoisonous, disinfectant cleaner called Bacterol. It is

a powerful germicide, deodorant, and cleaner. It destroys most disease germs and bacteria feeding on organic matter. Cleaner has been approved by leading health departments throughout the country. . . Use the Inquiry Card or write to the Bacterol Corporation of America, Dept. SM-403M, 431 New Jersey Railroad Ave. Newark, N. J.

### Floor Cleaning Instrument SM-411M

Wear and tear on floors can be reduced by use of the new Damp-Sweep Tool. It picks up grit and soot that dry brooms often leave behind. The Damp-Sweep Tool is a broom-type instrument used with a 40-inch square cloth with a taped hole at its center. The cloth is dampened, slipped over the handle, and wrapped around a brush element before sweeping.

This element is designed to hold the cloth against the floor, rather than to sweep dirt. The 3-foot handle is joined to the brush by a universal joint-type attachment. It permits the handle to be rotated to any angle while the brush remains stationary on the floor. It thus provides easy maneuverability in confined areas. . . Use the Inquiry Card or write to Walter G. Legge Company, Inc. Dept. SM-411M, 101 Park Ave. New York 17, N. Y.



### High-School Hair Dryer SM-421M

Excellent for the high-school locker room is this speedy National Hair Dryer. It will help gym students and athletes guard against colds due to wet hair. Its quick

For more facts use Inquiry Card. SM-39M

## Finest Locker Security at a NEW LOW PRICE



## Master KEY CONTROLLED COMBINATION LOCK NO. 1525

For student and school, here's locker security and control at its best—plus a new low price for easy budgeting. Constructed of hard wrought metals, double-wall case—brass over steel. . . smooth-working, trouble-free security. That's Master No. 1525, typical of the high quality built into every Master padlock.



### Master No. 1500

Rugged, dependable school favorite. Double-wall case, 3-tumbler mechanism. Like 1525 without key-control.

### Compare

QUALITY  
VALUE  
PRICE

Write us about your lock problems.  
Address Dept. 10

Master Lock Company, Milwaukee Wis.  
World's Leading Padlock Manufacturers



For more facts use Inquiry Card. SM-40M

*Everything for the Theatre*

GELATINE  
MAKE-UP  
SPOTLIGHTS  
PAINTS  
DRAPERIES  
COSTUMES  
STAGE HARDWARE  
SOUND EFFECTS  
SCENERY

**THEATRE  
PRODUCTION SERVICE**

1430 B'way New York, N. Y.

For more facts use Inquiry Card. SM-41M

**LONG LIFE  
PROTECTION**

When you decide on Continental Chain Link fence, you get 14 distinctive advantages including stronger and smoother operating gates . . . improved pivot-type hinges . . . self-locking barb arms . . . 20% more ties . . . and full gauge wire of KONIK steel. No other fence gives you greater protection at such low cost per year of fence life. Mail coupon today for complete information on Continental Chain Link fence.

\*Trade Marks Reg. U.S. Pat. Off.

CONTINENTAL STEEL CORPORATION  
Kansas, Indiana

Please send FREE copy of "Planned Protection"—complete manual on proper protection.

Name \_\_\_\_\_  
Address \_\_\_\_\_  
City \_\_\_\_\_ State \_\_\_\_\_

**CONTINENTAL  
STEEL CORPORATION**

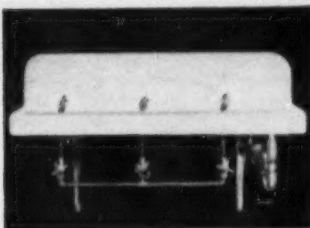
action will reduce locker room congestion and classroom tardiness.

Push-button starting, 3-minute operation, and automatic cutoff provide ample drying time without waste. Hair will dry in 1½ minutes if girls squeeze out bulk of surplus water! Heavy-duty construction, sealed and lubricated ball bearings assure years of trouble-free service. Operation is quiet and installation quick and easy. . . . Use the Inquiry Card or write to National Dryer Corporation, Dept SM-421M, 1125 West Lake St. Chicago 7, Illinois.



#### Portable Belt Sander SM-407M

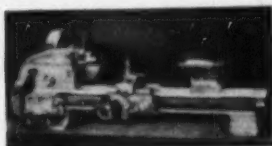
Excellent for reconditioning jobs of sanding desks and blackboards, for maintenance work, and for vocational classes is the Sanderplane. It is a roughing and finishing machine in one. It is adaptable not only to wood surfaces, but for use on metal, marble, and stone. Belt speed is approximately 1,500 surface feet per minute. Machine is available with or without dust collector bag. . . . Use the Inquiry Card or write to American Floor Surfacing Machine Company, Dept. SM-407M, Toledo, Ohio.



#### Drinking Fountain SM-401M

How efficient this multiple-head, wall-hanger-type drinking fountain is! It can accommodate three thirsty pupils at one time. The new model, No. 10B, features chrome-plated brass Haws "M" heads. These shielded, anti-squirt, angle-stream heads are sanitary. They are locked to unit with vandalproof socket flanges.

The fountain has automatic pressure-regulating, steam control valves. Its enameled iron receptor has a back 8 inches high. It comes with cast-iron wall brackets for quick installation. . . . Use the Inquiry Card or write to Haws Drinking Faucet Company, Dept. SM-401M, Fourth and Page, Berkeley 10, California.



#### New Lathe SM-409M

The South Bend Light Ten is a precision tool with the most recently developed improvements and refinements. This 10-inch, quick change gear lathe comes in four bed lengths. It has a hard, close-grained bed with unusual strength and long-wearing qualities. The quick change gear box provides 48 thread-cutting feeds, power longitudinal

feeds, or power cross-feeds. Two types of horizontal drive units are available. . . . Use the Inquiry Card or write to South Bend Lathe Works, Dept. SM-409M, South Bend 22, Indiana.

#### Germ-Killing Soap SM-429M

School absenteeism because of bacterial skin disease can often be reduced by use of powdered Germa-Medica hand soap, which contains Hexachlorophene (G-11), an active medicating agent. This enables

the soap to greatly lower the bacteria count on the skin and thus help reduce communicable disease, the maker claims. The use of Hexachlorophene helps prevent secondary infections from minor injuries and promotes rapid healing. . . . Use the Inquiry Card or write to Huntington Laboratories, Inc. Dept. SM-429M, Huntington, Indiana.

#### Dynamometer Set SM-428M

A low-priced, fractional-horsepower dy-

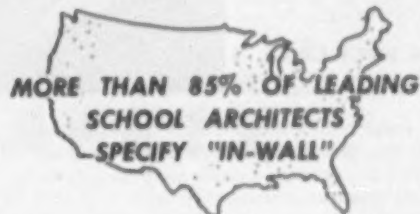
namometer good for technical high-school use is now available from General Electric. It can be used to study the characteristics of both driven and driving machines, and provides an accurate means of determining speed-torque curves, fuel or energy consumption, efficiency curves, maximum running torque, and so forth. The equipment has a continuous absorption or motoring rating of ¼ hp at 1,725 r.p.m. and an intermittent absorption rating of 1½ hp. Maximum permissible safe

For more facts use Inquiry Card SM-41M



### IN-WALL EQUIPMENT ACHIEVES FUNCTION AND ECONOMY IN SCHOOL DESIGN

Just as teaching methods change, so does the trend in school design. Space saving and other benefits of In-Wall equipment is attested to by satisfactory installation in hundreds of cities.



Not only are luncheon areas eliminated, so are table and chair storage areas. Now, more students can be served in less space.

Tables and benches roll down from the wall on rubber casters. No lifting. Easier cleaning after lunch period. Ruggedly constructed—no service problems.

Manufactured by

**SCHIEBER MANUFACTURING COMPANY**  
12724 Burt Road Detroit 23, Michigan



*In-wall*  
**FOLDING TABLES and BENCHES**

Write for catalog for details on In-Wall equipment for new construction and against-the-wall equipment for existing buildings or see Sweets.



(Continued from page 31)  
speed is 4,000 r.p.m. . . Use the Inquiry Card or write to General Electric, Dept. SM-428M, Schenectady 5, New York.

**Long-Span Building Units SM-414M**  
For economical, fire-resistant floors and roofs, consider Flexicore slabs. They are easy to erect either on new construction or on rebuilding jobs after a fire. These pre-cast, concrete slabs 6 x 12 inches in cross section will clear span

up to 22 feet. Hollow ducts in each slab reduce weight, and can be used for radiant panel heating or the installation of utilities . . . Use the Inquiry Card or write to Flexicore Company, Inc. Dept. SM-414M, 1932 E. Monument Ave. Dayton 1, Ohio.

**Magazine Rack SM-402M**  
Does your school library need the new Mag Rak? It contains five graduated pockets which can display a generous

number of magazines of all sizes. Rack hangs on wall or door, or can be had with pedestal to stand on floor. It is made of clear seasoned wood, smoothly sanded and ready to paint or stain any color. Size is 20 x 45 1/4 x 3 3/4 inches . . . Use the Inquiry Card or write to Rak Makers, Dept. SM-402M, Box 1616, New London, Conn.

**Trimming Board SM-404M**  
There is an improved Ingento Trimmer

For more facts use Inquiry Card. SM-43M

## Cleaning Costs Too High?



**SEND FOR THIS FREE BOOK**

It shows all models of General Electric heavy-duty cleaning equipment.

### FOR DRY PICK-UP

This model can be used for general cleaning jobs as shown above.

### FOR WET PICK-UP

It also takes up silt and mop water, as after cleaning floors.



To meet today's high maintenance costs, General Electric engineers have designed a complete line of heavy-duty vacuum cleaning equipment for buildings, schools, hospitals, industrial plants.

This line includes heavy-duty cleaners of various sizes and capacities, hand cleaners, furnace cleaner, also tools and accessories of many types.

These modern tools are helping management reduce maintenance costs not only in routine cleaning but when used for dust control and for recovery of small debris around machines.

Learn what modern cleaning equipment is best suited to your needs. We will gladly arrange for a survey of your cleaning requirements to be made without cost or obligation.

### Industrial Cleaners

**GENERAL ELECTRIC**

MAIL THIS COUPON TODAY

GENERAL ELECTRIC COMPANY, Dept. 22-118  
1285 Boston Avenue, Bridgeport 2, Connecticut

Our most serious cleaning problem is

Without obligation, please send new catalogue of heavy-duty cleaning equipment

NAME

FIRM

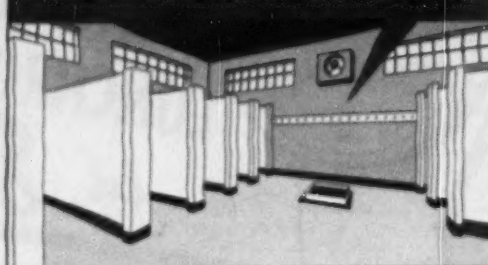
ADDRESS

CITY

STATE

For more facts use Inquiry Card. SM-44M

## Eliminate paint problems in locker and shower rooms!



Wherever you have paint problems due to moisture, they can be solved completely and economically with RAMUC® MILDEW-PROOF ENAMEL. Made especially for the purpose, this long-lasting enamel has a waterproof, chlorinated rubber base that withstands continuous exposure to steam and hot water—never blistering, peeling or fading.

Mildew-proof, easy to clean!

Furthermore, RAMUC contains a special fungicide that actively prevents the formation of mildew and eliminates musty, unsightly growths. Its hard, tile-like finish makes cleaning easy, too. Scrubbing and caustics will never dull RAMUC's smooth, sparkling appearance. And because one application lasts for season after season, you enjoy real dollar savings! For full information, write for Folder #582, today! \*Trademark

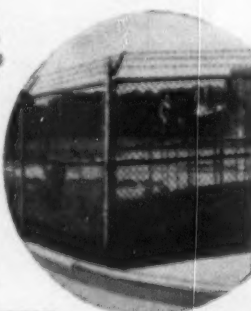
## INERTOL CO., INC.

480 Frothingham Ave., Dept. 5 Newark 3, N. J.

For more facts use Inquiry Card. SM-45M



- MAXIMUM PROTECTION 24 HOURS A DAY
- UNCLIMBABLE—SAFE
- KEEPS CHILDREN IN, TRESPASSERS OUT
- ANIMAL PROOF
- BETHANIZED WIRE—LASTS YEARS LONGER
- LOW MAINTENANCE COST. NO PAINTING
- HARMONIZES WITH BUILDINGS, PLANTINGS, ETC.
- SECURES MORE PAID ADMISSIONS
- FACILITATES HANDLING CROWDS



## IT ALL ADDS UP TO ATLAS

ATLAS FENCE is ideal for schools, playgrounds, swimming pools, athletic fields, parks and private grounds. Because of the way it is manufactured and installed . . . and because of the Bethanized wire from which it is made, Atlas is the most practical fence obtainable. The Bethanized wire, with its electrolytic application of pure zinc, provides a heavy, uniform coating that adds years of service.

Installed anywhere by factory-trained crews.  
Write today for full information.

**ATLAS FENCE COMPANY**  
PICKWICK & SALMON STS. PHILADELPHIA 34, PA.

## SCHOOL SUPPLIES AND EQUIPMENT

Use the SCHOOL MANAGEMENT coupon on page 29 of the Inquiry Card. Indicate by number of item on which you wish to receive further information.

for every cutting need, according to the manufacturer. All models now have an exclusive Single-Control paper guide with a self-aligning feature which assures perfect accuracy at all times. A safety guard rail for finger protection is standard on the 30-inch size, and optional on the 10, 12, 15, 18, and 24-inch sizes. Trimmers have tempered tool steel blades . . . Use the Inquiry Card or write to Ideal School Supply Company, Dept. SM-404M, 8328 Birkhoff Ave. Chicago 20, Illinois.



### Classroom Desk SM-400M

Designed to help provide for maximum light and visual efficiency as found in a coordinated classroom is the new American Universal Ten-Twenty desk. It has a light-finish, natural-wood top adjustable to level, 10, or 20-degree positions. Automatic fore-and-aft seat adjustment is provided . . . Use the Inquiry Card or write to American Seating Company, Dept. SM-400M, 901 Broadway, N. W. Grand Rapids 2, Michigan.

### Spraying Unit SM-427M

School maintenance jobs of painting and spraying are easily handled with the Sprayit "Series 270" portable spraying unit. It can be used for applying paint, varnish, enamel, lacquer, or chemical insecticides, in or out of doors.

Easily-operated machine has a 1-quart aluminum container for spray material

For more facts use Inquiry Card. SM-46M

**CLEARANCE SALE**

16 mm Films

Build your own film library. Want a real buy in 16mm SOUND FILMS? Take advantage of the E.F.S. 1958 CLEARANCE SALE of educational films—travel, natural and physical sciences films, juvenile, Christmas, sport films, etc. — Now and Like-Now. Send for our giant list "C" today.

Edited Pictures System, Dept. 5,  
165 W. 46th St., New York 19, N. Y.

For more facts use Inquiry Card. SM-47M

Finest Quality **Brushes** ARTISTS' MATERIAL **Colors**

**M. GRUMRACHER** Write For Free Price List

440 West 34th St.,  
New York 1, N. Y.

and an internal-mix spray gun. There are interchangeable nozzles in round, fan, and angle patterns. This 39-pound unit is self-lubricating and has sealed bearings. It operates on a  $\frac{1}{4}$  hp motor. . . . Use the Inquiry Card or write to Electric Spray Company, Dept. SM-427M, Sheboygan, Wisconsin.

#### Shower Head SM-408M

A new shower head that eliminates the problem of lime or clogged and dripping shower heads is called the Act-O-Matic. It has automatic self-cleaning action. Unique feature of this unit is a spray disc which moves upward and downward automatically, enabling the shower head to be self-draining when the water is off. Head comes chrome plated with ball joint and volume control. Vandalproof models are available. . . . Use the Inquiry Card or write to Sloan Valve Company, Dept. SM-408M, 4300 West Lake St. Chicago 24, Illinois.



## MANUFACTURERS' LITERATURE

Use the SCHOOL MANAGEMENT column on Page 29 of the Inquiry Card. Indicate key number of item on which you wish to receive further information.

#### Heating Costs SM-469M

"Management Influence on Fuel Costs" is the title of a detailed little bulletin that clearly compares four plants of like size and similar basic equipment which pay from a low of \$80,000 to a high of \$136,000, for the same end value on their fuel. Factors considered in comparing efficiency are kind of management, description of boiler room, observed plant data, heat balance, and dollar variables. . . . Use the Inquiry Card or write to Roy Emmert Associates, Dept. SM-469M, El-Roy Lodge, Westerlo, New York.

#### Roof Trusses SM-468M

Spans of 25 to 150 feet can be trussed safely and economically with the strong truss design shown in this folder. They are particularly fine for gymnasiums and auditoriums. . . . Use the Inquiry Card or write to American Roof Truss Company, Dept. SM-468M, 6850 Stony Island Ave. Chicago 49, Illinois.

#### Playground Equipment SM-464M

Sturdy bicycle racks, swings, steel tennis nets, climbing structures, slides, merry-go-rounds, foot baths, picnic grills, and diving boards are some of the pieces of playground equipment presented in this giant, illustrated folder. . . . Use the Inquiry Card or write to American Playground Device Company, Dept. SM-464M, Anderson, Indiana.

#### School Cleaning SM-471M

"School Cleanliness" is a booklet which gives suggestions for keeping the school, its occupants, and its equipment clean. Cleaners for use on surface of buses, chairs, different types of floors, plumbing fixtures, shades, walls, china, and glassware are included. . . . Use the Inquiry Card or write to Colgate-Palmolive-Pet Company, Dept. SM-471M, 105 Hudson St. Jersey City 2, New Jersey.

#### Intercom Equipment SM-437M

Folder entitled "The New Executone" outlines the manufacturer's completely new line of intercommunication equipment, stressing the special features in-

volved in method of signaling, switching, expanding, and so forth. . . . Use the Inquiry Card or write to Executone, Inc. Dept. SM-473M, 415 Lexington Ave. New York 17, N. Y.

#### General Equipment SM-467M

All sorts of equipment useful in schools—from plastic pitchers and heavy garbage cans to mop heads and vacuum cleaners—are found in this Supplement No. 5001 illustrated catalog. . . . Use the Inquiry

Card or write to Albert Pick Co. Inc. Dept. SM-467M, 2189 Pershing Rd. Chicago 9, Illinois.

#### Testing and Guidance SM-462M

This 1950 catalog lists over 40 tests including those for intelligence, interest, emotional adjustment, scholastic achievement, specific aptitude, and occupational proficiency. Also described are reading improvement materials, learning aids, booklets in the Life Adjustment Series,

and professional publications. . . . Use the Inquiry Card or write to Science Research Associates, Dept. SM-462M, 228 South Wabash Ave. Chicago 4, Illinois.

#### Audio-Visual Materials SM-470M

"Sales Catalog of Audio-Visual Materials" contains extensive listing of 16-mm. films; projectors, recorders, and other audio-visual equipment; and audio-visual handbooks. . . . Use the Inquiry Card or write to Ideal Pictures Corpora-

For more facts use Inquiry Card. SM-48M



## Invest in SAFETY...

When buying school buses . . . your first concern is the *safety* of the children they will carry.

Your second concern is that the buses you buy operate dependably—at low cost, over a long period of time.

Dodge "Job-Rated" school bus chassis have established an enviable reputation among school authorities on *both* points.

Dodge "Job-Rated" school bus chassis are engineered and "Job-Rated" to provide

maximum safety and economy. Each is equipped with a wealth of other safety features which equal, and in most cases, surpass national school bus standards.

There is no better *economy* than that provided by the right "Job-Rated" engine. And—for more than 30 years—DODGE and DEPENDABILITY have meant one and the same thing.

Ask your Dodge dealer to explain the *many* advantages Dodge "Job-Rated" chassis can bring to your school bus operation.

### Dodge "Job-Rated" School Bus Chassis

are available for bodies accommodating		
30, 36, 42, 48, 54 and 60 passengers!		
		
MODEL FS-152 2 models—10,000 and 11,800 lbs. G.V.W. for 30 and 36 pupils.	MODEL FS-170 2 models—12,025 and 13,000 lbs. G.V.W. for 36 and 42 pupils.	
		
MODEL GS-W2, HHS-W2 GS-152, 14,650 lbs. G.V.W. HHS-152, 15,300 lbs. G.V.W. For 48 pupils.	MODEL JS-212 2 models—16,125 and 17,000 lbs. G.V.W. for 54 pupils.	MODEL RS-229 2 models—16,075 and 16,800 lbs. G.V.W. for 60 pupils.

For their safety...switch to-

# DODGE

"Job-Rated"

## SCHOOL BUS CHASSIS

(Continued from page 33)  
tion, Dept. SM-470M, 36 East 8 St.  
Chicago 5, Illinois.

**Rolling Grilles SM-474M**  
Catalog gives details concerning the  
rolling steel grilles for corridors and  
stairs and the counter shutters used in  
schools. Use the Inquiry Card or  
write to Cornell Iron Works, Inc. Dept.  
SM-474M, 36 Ave. and 11 St. Long Is-  
land City 6, New York.

For more facts use Inquiry Card. SM-488M



## Now you can start a HEARING CONSERVATION PROGRAM for less than \$200

Thanks to an ingenious new portable  
Audiometer developed by Sonotone,  
any school can now start a hearing  
conservation program for less than  
\$200! Sonotone's Audiometer is easy  
to operate—any adult can quickly  
learn to measure students' hearing  
accurately. Many academic and so-  
cial failures have been corrected by  
the discovery and alleviation of hear-  
ing problems. No wonder so many  
schools have joined the hearing con-  
servation movement given so much  
impetus by Irving I. Schachtel, Presi-  
dent of Sonotone, who published  
"Conserving Our Children's Hearing"  
(available on request). Get the de-  
tails of Sonotone's new portable Au-  
diometer—the precision-perfect in-  
strument that any school can now  
afford. Mail coupon below today.



Three simple controls make hearing tests  
quick, easy, accurate. And Sonotone's  
portable Audiometer costs less than \$200!

**SONOTONE**  
Elmsford, New York

**FREE**

Please send complete details  
of new portable Audiometer.  
No obligation.

Name.....

School.....

Address.....

## TEACHING MATERIALS

Use the school management coupon on Page  
29 or the Inquiry Card. Indicate by number  
of items on which you wish to receive further  
information.

**Flag Poster SM-487M**  
"United Nations." 8 1/2 x 11 inches. 10¢  
each; 1/4¢ each for 100 or more copies.  
This is a new, full-color poster planned  
for school use. It illustrates and identi-  
fies the flags of the 59 members of the  
United Nations. Also included is the  
flag of the United Nations itself, adopted  
by the General Assembly on October 7,  
1947. All information on the poster is  
given in both English and French...  
Use the Inquiry Card or write to Sales  
and Circulation Section, Dept. SM-487M,  
United Nations, Lake Success, N. Y.

**Felt Suggestions SM-488M**  
"Fun with Felt." Illustrated. 38 pages.  
25¢

This combined catalog and instruction  
manual claims that everyone can have  
fun with felt. Various sewing stitches  
are explained; the making of felt flowers  
is described; and patterns which can be  
enlarged are given for such articles as a  
coin purse, beanie, pencil case, lapel  
gadgets, and book marks. The catalog  
section lists kits for the making of many  
interesting objects by groups... Use  
the Inquiry Card or write to Fun with  
Felt Corporation, Dept. SM-488M, 390  
Fourth Ave. New York 16, New York.

**Pottery Materials SM-489M**  
"Pottery Arts Catalog." Color illustra-  
tions. 60 pages. 25¢.

In addition to an extensive listing of  
supplies and equipment, this booklet con-  
tains an illustrated, 18-page article on  
pottery techniques and a glossary of the  
terms used. There is also a section on  
temperature equivalents and other charts  
useful to both professionals and be-  
ginners making pottery... Use the In-  
quiry Card or write to the Pemco Cor-  
poration, Dept. SM-489M, 501 Eastern  
Ave. Baltimore 24, Maryland.

For more facts use Inquiry Card. SM-30M

## FOR ALL FOLDING-CHAIR NEEDS

**American "FOLDING FORTIES"**

OFFER COMFORT, GOOD LOOKS, DURABILITY, ECONOMY

- ✓ CAFETERIAS
- ✓ LIBRARIES
- ✓ GYMNASIUMS
- ✓ OFFICES
- ✓ CLUB ROOMS
- ✓ AUDITORIUMS
- ✓ ASSEMBLY ROOMS
- ✓ CHAPELS



**American Folding Chair No. 44 with plywood seat—Strong:** Frame  
is triangular steel tubing with solid-steel cross braces. Comfortable:  
formed hardwood seat of five-ply urea-resin-banded plywood, 14 1/2"  
wide, 15" deep; light-walnut stained, durably lacquered. Formed-steel  
back panel. Safe: Can't tip forward in use, no snagging, pinching, or  
sawing hazards. Quiet: Folds quickly and quietly; easy to carry and  
store. Metal parts finished in baked enamel. Replaceable rubber feet.

**No. 43—**Some durable construction, with formed-steel seat. Suitable  
also for outdoor use.

**American Seating Company** (Incorporated in Michigan)

Branch Offices and Distributors in Principal Cities  
Manufacturers of School, Auditorium, Theatre, Church, Transportation, Motion Picture, and Folding Chairs

**Teaching with Maps SM-485M**  
"Teaching Social Studies thru Maps."  
WA100. 24 pages. Single copies free.

This teaching manual by Dr. Edgar  
Bruce Wesley first considers the func-  
tions and techniques of maps. Then it  
discusses the *Our America* series of  
maps, presents teaching exercises de-  
signed to develop map skills, and lists  
many study-guide questions for each  
map... Use the Inquiry Card or write  
to Denoyer-Geppert Company, Dept.  
SM-485M, 5235 Ravenswood Ave. Chi-  
cago 40, Illinois.

## NEW RECORDINGS

Use the school management coupon on Page  
29 or the Inquiry Card. Indicate by number  
of items on which you wish to receive further  
information.

**SM-493M—Voices of Yesterday.** 24  
programs on magnetic tape, each pro-  
gram—\$4.50.

The actual voices of 24 historic figures  
are heard on these programs. Originally  
recorded by Thomas A. Edison on wax  
cylinders, the voices have been amplified  
and modernized. Each program contains  
dramatized incidents in the lives of these  
figures, and then is climaxed by their  
own voices. Participants include Florence  
Nightingale, William Jennings Bryan,  
Sarah Bernhardt, Thomas A. Edison,  
Adm. Robert E. Peary, Theodore Roose-  
velt, Woodrow Wilson, Will Rogers,  
Jane Addams, and Guglielmo Marconi.  
These programs, each approximately 15  
minutes in length, can be played on any  
standard tape machine operating at a  
speed of 7 1/2 inches per second... Use  
the Inquiry Card or write to Educa-  
tional Services, Dept. SM-493M, 1702  
K St. N. W. Washington 6, D. C.

**SM-494M—Working on the Railroad.**  
One nonbreakable, 10-inch record—\$1.44

This excellent record tells the story  
of our first transcontinental railroad, and  
serves as an introduction to railroad  
history. Tom Glazer and the Gene Lowell  
chorus sing about Kit Carson, Paddy,

and Shiny Silver Rails... Use the In-  
quiry Card or write to Young People's  
Record Club, Dept. SM-494M, 40 West  
46 St. New York, N. Y.

**SM-495M—I Can Hear It Now.** Five  
12-inch records—\$5.95. One 12-inch, LP  
microgroove record—\$4.85.

This is Volume II of "I Can Hear It  
Now," with CBS newscaster Edward  
R. Murrow as narrator. It opens with  
1945 V-J Day celebrations all over the  
world and continues through the 1948  
presidential campaign. This album in-  
cludes the voices of Franklin D. Roose-  
velt, Harry S. Truman, Fiorello H. La  
Guardia, Clement R. Atlee, George  
Marshall, Mrs. Franklin D. Roosevelt,  
Jawaharlal Nehru, David Lilienthal,  
Marshall Tito, Thomas E. Dewey,  
Andre Y. Vishinsky, Dwight D. Eisen-  
hower, Henry A. Wallace, and Jan  
Masaryk... Use the Inquiry Card or  
write to Columbia Records, Inc. Dept.  
SM-495M, 799 Seventh Ave. New York  
19, N. Y.

**R**ADIO Corporation of America,  
Victor Division, Dept. SM-K,  
Camden, New Jersey, has three gay  
albums in its new "Little Nipper" series.  
Each has a brightly illustrated story-  
book section to correlate with the narra-  
tion. A simple signal on the record, given  
by barking Nipper or by one of the  
characters, tells the listener-reader when  
to turn the page. Each album, two non-  
breakable 10-inch records, and story-  
book section—\$3.57.

**The Little Engine that Could.** The re-  
written and re-recorded story of a loco-  
motive that finally made the grade  
through sheer grit and determination—  
replete with sound effects. Dept. SM-  
496M.

**Pinocchio.** In this children's classic,  
Jimmy Cricket chirps the page-turning  
signal. Dept. SM-497M.

**Little Black Sambo.** Paul Wing tells  
this story without the caricature it is  
so often given. Illustrations are quite  
charming. Dept. SM-498M.

For more facts use Inquiry Card. SM-31M

**Symphonix**  
The Symbol of Superiority

TESTED  
AND  
PROVEN BY  
LEADING  
SCHOOLS  
EVERYWHERE

List  
\$19.95  
Tax  
Included

**#39-3 VARSITY TRIO** • Sensational and new 3-speed  
record player for 33 1/3, 45 and 78 RPM records. • Heavy  
duty precision motor and simplicity in change of speed.  
• Newly designed 6-gram lightweight reproduction arm with  
2-way crystal and needles of over 5,000 playings each.  
• Just a flick of the finger will change the arm from micro-  
groove to regular type record. • High fidelity super-three-  
tube amplifier. • 5 1/2" quality speaker. • Separate tone  
and volume control. • A custom built instrument designed  
for the utmost in music enjoyment of all types of records.  
• Handsome carrying case covered in blue durable alligator  
leatherette trimmed with brass grille and hardware. • Size:  
15 1/2" x 14" x 7 1/2". • A.C. only. • 33 1/3, 45 or 78 RPM.

See your local school supply distributor  
or write direct for 1950 brochure and discount

**RMA**  
RCA Licensed  
Manufacturers

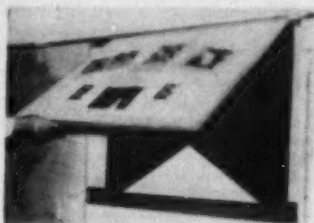
**SYMPHONIC RADIO  
& ELECTRONIC CORP.**

Manufacturers of America's most  
complete line of Record Players



## NEW AUDIO-VISUAL EQUIPMENT

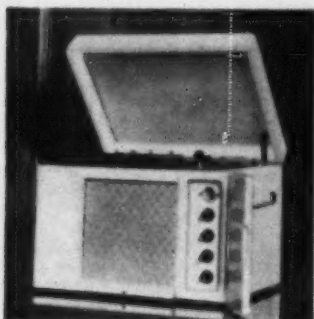
Use the SCHOOL MANAGEMENT coupon on page 29 of the Inquiry Card. Indicate key number of item on which you wish to receive further information.



**Projection Screen SM-449M**

If you want to project audio-visual materials without special classroom darkening, the new Bulletinboard Projection Screen will do the job for you. Standard sun curtains provide sufficient dimming for its use.

A highly efficient screen surface over a specially prepared mat allows for maximum light reflection. It gives freedom from image distortion or blurring at ranges from 1 foot to maximum classroom length. Surface accommodates a 40-inch-wide image. When not in use, the folded screen provides bulletinboard space. . . . Use the Inquiry Card or write to Wisconsin Audio Visual Company, Dept. SM-449M, 601 West Wilson St. Madison 3, Wisconsin.



**Soundmirror Tape Recorder SM-445M**

Planned especially for use by educators and students is the new Educational Soundmirror magnetic tape sound recorder. This high-quality, low-priced machine has an output of 2½ watts, sufficient to give adequate volume for large classrooms without need for a separate amplifier. It has an "RCA accordion cone" speaker. A special panel on the back has telephone-type plug connections for radio input, microphone input, and external speaker output. Handles on both sides make the unit easily transportable from classroom to classroom. . . . Use the Inquiry Card or write to the Brush Development Company, Dept. SM-445M, 3405 Perkins Ave. Cleveland 14, Ohio.



**Knight Tape Recorder SM-447M**

For use as an economical teaching aid in drama, speech, and language training classes and for recording important

school activities, the new Knight magnetic tape recorder does yoman service. It is portable, light, compact, and easily operated. Tape threading is simplified; there is only one control for tape transport.

Machine has a built-in, high-gain amplifier and a PM speaker, with provision for external connections. Hour-long recordings can be made from the crystal hand mike furnished or from any radio, FM tuner, or phonograph. Unit

can serve as a medium coverage PA system, with a 5-watt output. . . . Use the Inquiry Card or write to Allied Radio Corporation, Dept. SM-447M, 833 West Jackson Blvd. Chicago 7, Illinois.

**Tapemaster Tape Recorder SM-448M**

The versatile Tapemaster features 3 recording speeds. There is a speed of 3¾ inches of tape per second for recording dictation, conferences, field research pickups; 7½ inches of tape per second

for general music pickups, talks, programs; 15 inches of tape per second for pickups where extremely high fidelity is required, such as in symphonic music. Any desired portion of a recording may quickly be located, since the machine has a 30-to-1 ratio, high-speed forward and reverse action. Control selection is simple.

This complete recording and playback machine combines ruggedness with lightness by using a one-piece, cast aluminum

For more facts use Inquiry Card. SM-88M

## Two Great New Popular-priced AMPRO Educational Aids



**\$94.50**

Complete with microphone, take-up reel, radio-phon plug, speaker and amplifier.

WRITE TODAY for full details about this remarkable new low cost Ampro tape recorder . . . latest aid to more effective teaching.

### A Revolutionary New AMPRO Low Priced Tape Recorder Records 2 FULL HOURS ON ONE 7-INCH REEL!

A completely new tape recorder and playback unit with a host of new and exclusive features for church and school use.

**LOWEST FIRST COST . . .** price of only \$94.50 complete. It fits the most modest educational budget!

**LIGHTEST, MOST COMPACT . . .** It weighs in at only 13 pounds and measures only 8½" x 8" x 12"

**GREATEST OPERATING ECONOMY . . .** as a result of its slow recording speed, this Ampro Tape Recorder puts almost twice as much material on each reel . . . 2 full hours of recording on one standard 7" reel of low cost tape.

**SIMPLEST TO OPERATE . . .** a child can operate this new unit. There are no costly, complicated "gadgets" which merely confuse the operator.

**EXCLUSIVE AMPRO FEATURES** include an "audio-monitoring" system, fast forward ship, fast re-wind, manual re-wind, timing indicator, plus many others that make tape recording for school or church easier, lower in cost.

### New Type Lightweight Ampro Sound Projector at a Popular LOW PRICE!

The new Ampro "Stylist" is the perfect 16mm. sound projector for classroom use. Astonishing lightweight and compactness are made possible by the use of new, tough materials. Quick, easy set-up, simplified operation, remarkable portability and simplified operation at both sound and silent speeds . . . are just a few of the many advantages of this amazing new development in quality sound projectors.

The actual lift-up weight of the "Stylist" projector and amplifier unit is only 20 pounds! A young girl can easily lift it up to place on stand or table. The handy lift-off case, speaker and accessories weigh less than 9 pounds.

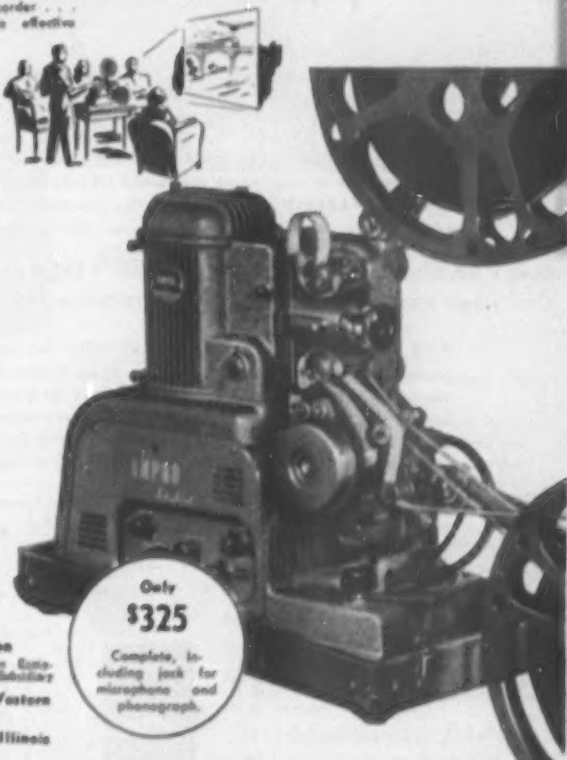
The remarkably low price of this new projector . . . only \$325 complete, means outstanding value and assures budget approval in these economy days. Ask your dealer today for an eye-opening demonstration of this new record-breaking Ampro "Stylist" 16mm. sound and silent projector. WRITE TODAY for illustrated brochure giving full details and specifications on the new Ampro "Stylist."



**Ampro Corporation**  
A General Precision Equipment Corporation Subsidiary  
2863 North Western Avenue  
Chicago 18, Illinois

**Only \$325**

Complete, including jack for microphone and phonograph.



(Continued from page 33)  
alloy chassis. Its rubber-footed base measures only 16 x 6 inches. Use the Inquiry Card or write to Empire Office Equipment Company, Dept. SM-448M, Pullman, Wash.

**New Screen Surface SM-446M**  
Polarized stereo slides can be projected with brilliance and realism on the new Stereo-Challenger. It has a specially processed metallic surface called Wom-

der-Lite which reflects and intensifies light without depolarizing it. Screen comes with a picture surface measuring 40 x 40 or 50 x 50 inches. Screen fabric hangs absolutely flat. This easily-carried, quickly-set-up tripod unit is also suitable for standard two-dimension projection of slides, filmstrips, opaque materials, and movies. Use the Inquiry Card or write to Da-Lite Screen Company, Dept. SM-446M, 2719 North Pulaski Rd. Chicago 39, Illinois.

**I**N Alpessa, Michigan, the 12th grade civics class emphasizes the local problems of education, reports *Education Summary*. Under the guidance of Superintendent R. H. Wilson, students investigate the purpose of the public school system, how it is governed, financed, organized, administered. They consider:

1. The distinction between policy-making and administrative functions.
2. The school budget.
3. Why people pay school taxes.

## CHECK LIST OF NEW PUBLICATIONS

Use the SCHOOL MANAGEMENT column on page 28 or the Inquiry Card. Indicate key number of item on which you wish to receive further information.

### For Administrators

**Public Relations for America's Schools.** 1950 Yearbook of the American Association of School Administrators. AASA, Dept. SM-300M, 1201 Sixteenth St. N. W., Washington 6, D. C. 497 pages. \$4.

Here is a book which should be of great value to the administrator who wants to explain his work to the public (And what one does not?) While not intended primarily as a handbook of methods, the book deals with the broader fields of purposes, principles, relationships, and values implicit in a public relations program. It starts with an exposition of the seven principles which should characterize a good program. It continues with discussions on school needs as the basis for public relations; the work of the school board, the school staff, and professional organizations; and closes with the effective use of techniques and media.

A valuable bibliography and a roster of association members, listed alphabetically by states, are included. Paul J. Miner, superintendent of schools of Glenview, Illinois, was chairman of the yearbook commission.

**Cuyamaca Story.** By James Mitchell Clarke. San Diego City-County Camp Commission, Dept. SM-205M, 405 Civic Center, San Diego 1, California. 32 pages. 30¢.

Tells the story of a "pilot project" for school children in San Diego. Public school systems, in cooperation with the city and county governments, have provided camping education as a regular service to the community.

**Educational Law Simplified.** By David Taylor Marke. Oceana Publications, Dept. SM-201M, 461 West 18 St. New York 11, N. Y. 96 pages. \$2.

Explains in non-technical language the general legal provisions governing everyday school life as it affects teachers, pupils, parents, and other educational employees. Each section is devoted to a different aspect of the law, and illustrative cases are cited in this handy compilation.

**CALIFORNIA Association of School Administrators** sponsors two studies of value to school administrators and others interested in public relations. Both are available from Dr. John A. Saxon, executive secretary, Dept. SM-M, 35 North Raymond Ave. Pasadena 1, Calif. at the prices listed below.

**Lay Advisory Committees to Boards of Education in the United States.** By J. H. Hull. 26 pages. Single copies

For more facts use Inquiry Card. SM-54M

## EDUCATIONAL LAW

### SIMPLIFIED

by David Taylor Marke  
Education Editor of  
The Associated Press

Explains and illustrates the Educational Law in all 48 states as it affects administrators, teachers, pupils, parents and other educational employees.

Mail \$1 today for your copy postpaid Publishers of How to Make a Will, Real Estate Law, Hasty Law, Law of Civil Rights & Liberties, Landlord & Tenant Law, Labor Law—\$1 each ppd. Write for FREE catalog.

OCEANA PUBLICATIONS, Dept. 880,  
461 West 18th St., New York 11, N. Y.

For more facts use Inquiry Card. SM-53M

announcing special ½ price

# CLASSROOM and GROUP RATE

for PARENTS' MAGAZINE

for study of the best methods in child rearing  
... family living ... and home management

8  
months  
for  
\$1



4  
months  
for  
50¢

The regular price of PARENTS' MAGAZINE is \$3.00 a year, but now—for a limited time, you may offer your students or group members a subscription at HALF PRICE, in groups of five or more. These may be sent in bulk, to your class, or to the home address of the individual students.

**HOME ECONOMICS TEACHERS:** NOW you can make PARENTS' MAGAZINE available to every student in your home economics classes. They'll welcome this unusual opportunity to receive PARENTS' MAGAZINE at this tremendous saving. They'll refer to the authoritative articles in its appealing pages for their assignments in

FAMILY DEVELOPMENT • FAMILY FUNDAMENTALS • CHILD CARE AND DEVELOPMENT • PARENT EDUCATION

HOME MANAGEMENT • FOODS AND NUTRITION • CLOTHING AND DESIGN • ADULT EDUCATION

**P.T.A. & MOTHERS CLUBS IN YOUR SCHOOL:** The leaders of the parents' groups in your school will be so grateful for these FREE STUDY PROGRAMS for the entire club year, based on subjects of vital interest to parents of preschool and school age children. Send for these FREE PROGRAMS TODAY, in sufficient quantity to distribute to the entire membership of your parents' groups. They'll be eager to attend meetings that provide so much practical help on the everyday problems of family living.

### FREE PROGRAMS for the asking!

Send for copies of these two study programs, "Better Ways with Young Children" for preschool groups; and "Parenthood is what you make it" for groups interested in school age children. They'll contribute to the success of your meetings!



CLASSROOM and GROUP STUDY BUREAU,  
PARENTS' MAGAZINE, 53 Vanderbilt Ave., New York 17, N. Y.

Please enter the following subscriptions for the members of my ☐ class ☐ parents' group for

☐ 8 months for \$1 ☐ 4 months for 50¢

I can use \_\_\_\_\_ copies of the School age program and \_\_\_\_\_ copies of the preschool program

NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

CITY \_\_\_\_\_ STATE \_\_\_\_\_

CLASS OR GROUP \_\_\_\_\_

SM5-30

SM; special quantity prices. SM-203M.

Gives pertinent facts as to how lay advisory committees are organized, their function and purpose, how they work, results obtained, and other information of significant value to anyone interested in the problem of better or more functional relationships between the people and the public schools.

**The People and the Schools of California.** Edited by Theodore L. Reller. De luxe binding \$2.75; leatherette \$1.75; quantity prices on request. SM-203M.

The first yearbook of the Association reports a year's study of best practice in 250 public school systems in dealing with problems of lay participation, lay understanding, and lay support for the program of public education in California. Public relations is recognized as a function and responsibility of administration. Specific procedures are presented. Topics dealt with are: critical analysis of public relations problem; the causes of the present crisis in public education; responsibility for a program of social interpretation; the meaning and importance of public participation in educational affairs; and how to calendar and conduct such programs, the use of the printed and spoken word, human relations and public relations.

#### Shop

**SCIENTIFIC Book Publishing Co.** Dept. SM-M, 530 South Fourth St. Vincennes, Indiana, offers two textbooks on electrical instruction by Leonard R. Cron.

**SM-228M—Learning Electricity and Electronics Experimentally.** 525 pages. \$4.40. Experiments arranged to develop the important principles of magnetism, electromagnetism, electromagnetic induction, and so on.

**SM-227M—Saturating Core Devices.** 373 pages. \$4.20. Designed as a means to acquaint the elementary student in electric sciences with electric phenomena. Contains simplified description of saturable core devices and applications.

**Architectural Drawing for the Building Trades.** By Joseph E. Kenny and John P. McGrail. The McGraw-Hill Book Co. Inc. Dept. SM-226M, 330 West 42 St. New York 18, New York. 128 pages. \$3.

The student is introduced to drafting instruments and told how to use them. The practical training contained gives the student some geometric construction and sufficient pictorial drawing and orthographic projection to provide a basis for further study.

**Elements of Diesel Engineering.** Second edition. By Orville L. Adams. Norman W. Henley Publishing Company, Dept. SM-224M, 254 West 54 St. New York 19, New York. 367 pages. \$5.

Engineering standards and the attitude of the Diesel industry are accurately presented. Fundamentals are clearly explained in logical step-by-step manner, with no confusing language.

#### Health and Physical Education

**Organization and Administration of Physical Education.** Second edition. By Edward F. Voltmer and Arthur A. Esslinger. Appleton-Century-Crofts, Inc. Dept. SM-225M, 35 West 32 St. New York 1, New York. 419 pages. \$3.50.

Provides for discussion and consideration of pertinent problems facing the administrator today. Serves not only as a text for classwork but also for the teacher in charge of activities. Much of the material is the result of extensive research conducted at the State University of Iowa by Professor Voltmer.

**PROJECT in Applied Economics.** College of Education, University of

Florida, Gainesville, Florida, offers several supplementary books for functional school-community health education programs.

**SM-213M—Gertrude's New House.** A story of a Negro girl who helps her family improve health and housing conditions. 25¢.

**SM-214M—Glen Can Walk.** Milk and its importance in the diets of boys and girls. 25¢.

**SM-215M—Health and Happiness**

**Rhymes.** The familiar rhymes directed to improve health. 25¢.

**SM-216M—Jack's Secret.** A story of the effects, discovery, and treatment of tuberculosis. 15¢.

**SM-217M—Muddy Water.** Soil erosion and its effect upon life and health. 35¢.

**SM-218M—One Guide.** (Jack's Secret, Roddy the Rat, or Pineville High). Activities and instructions for using these booklets. 10¢.

**SM-219M—Pineville High Meets the**

**Challenge.** Controlling hookworm, and plans for home sanitation. 15¢.

**SM-220M—Roddy the Rat.** The facts and ways of preventing typhus fever. 15¢.

**SM-221M—Springfield on the March.** Community agencies and the services they offer. 35¢.

**SM-222M—Waters.** The value of a dependable and sanitary water supply. 35¢.

**SM-223M—We Will Sing One Song.** Well-known songs with words related to improving diets. 35¢.

For more facts use Inquiry Card. SM-33M



**QUIET, PLEASE .... minds at work!**



It's difficult for a student to study or for a teacher to teach in noisy, distracting surroundings. Both attention and concentration lag when unwanted sounds form a constant, irritating influence.

That's why more and more schools are giving their faculty and students the permanent quiet and comfort they need for effective instruction and learning. At very modest cost, modern sound conditioning immediately quiets any hallway,

classroom, auditorium or cafeteria—for good!

Acousti-Celotex Sound Conditioning ceilings can be quickly, easily installed to suit any specification or building code. No special maintenance is required.

Do as thousands of schools have already done. Contact your local distributor of Acousti-Celotex products for an expert, free analysis of your sound conditioning requirements.

**ABOVE:**  
This new library at the June Addams Junior High School in Seattle enjoys built-in quiet with Acousti-Celotex sound conditioning.

**WRITE NOW** for his name and for your free copy of "25 Questions and Answers on Sound Conditioning." The Celotex Corporation, Dept. K-5, 120 S. La Salle St., Chicago 5, Ill. In Canada, Dominion Sound Equipments, Ltd., Montreal, Quebec.



**ACOUSTI-CELOTEX**

**Sound Conditioning Products**

PRODUCTS FOR EVERY SOUND CONDITIONING PURPOSE

THE CELOTEX CORPORATION • CHICAGO 5, ILLINOIS



**M**ANY ideas and techniques discussed at a meeting of the New York State Audio-Visual Council at Syracuse University, are being put into practice and studied throughout the state, reports Film World.

Among them are: teacher-training in use of audio-visual materials; assistance to local school districts in their in-service programs; construction and remodeling of school buildings for effective use of audio-visual materials; and study of programs from other states.

For more facts use Inquiry Card. SM-563M

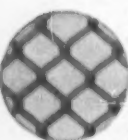
**NEVER NEEDS PAINTING**  
**NO MAINTENANCE COSTS TO WORRY ABOUT!**

**Copperweld**  
**NON-RUSTING**

Copperweld® Chain Link Fence provides long life, low cost protection. It never needs to be painted—costs less per year than any other chain link fence. Write for a sample and descriptive literature.

®Trade Mark

**COPPERWELD STEEL COMPANY**  
Glassport, Pa.



Close-up of Copperweld Chain Link Fence. The strong steel core prevents sagging and breakage—the thick Molten-Welded copper covering provides permanent protection against rust.

**MAIL THIS COUPON**  
FOR NEW CATALOG ON  
COPPERWELD CHAIN LINK FENCE

Copperweld Steel Company  
Glassport, Pa.

Please send me your Chain Link Fence Catalog.

Name \_\_\_\_\_  
Company \_\_\_\_\_  
Address \_\_\_\_\_  
City \_\_\_\_\_ State \_\_\_\_\_

## CHECK LIST OF NEW AUDIO-VISUAL AIDS

Use the SCHOOL MANAGEMENT coupon on page 28 or the Inquiry Card. Indicate key number of item on which you wish to receive further information.

### Educational Films

Prices subject to change without notice. In some cases rentals vary. Where true, the word "rental" is used. Send to distributor for rates. Where films are sent free, except for transportation charges, the word "loan" is used. All films are 16 mm. unless otherwise noted.

**BUREAU of Mines, Dept. SM-M.** Experiment Station, Graphic Services Section, 4800 Forbes St. Pittsburgh 13, Pennsylvania, offers two films of interest to vocational schools and high-school classes in social science and mechanics. Loan.

**Story of a Spark Plug.** 21 min. (Sponsored by Champion Spark Plug Co. Toledo, Ohio.) Describes in non-technical fashion the function, manufacture, and maintenance of this vital part of the modern internal combustion engine. SM-308M.

**Story of Tinplate.** 27 min. (Produced in cooperation with Weirton Steel Co.) Depicts step by step the making of tinplate from the raw materials to the finished product. SM-309M.

**FILMS of the Nations, Inc. Dept. SM-M.** 62 West 45 St. New York 19, New York, offers two new films on Belgium. Sale—color, \$80; black and white, \$26. Rental—color, \$3; black and white, \$1.50.

**Handicrafts of Belgium.** 11 min. Deals with lacemaking, pottery, glassblowing, and glass polishing and etching. Bruges, the ago-old city and cradle of lacemaking, is shown. SM-315M.

**Work and Play in Belgium.** 21½ min. Depicts old cities such as Bruges and Ghent and the modern suburbs of Brussels and Antwerp. Gives factual information about the country, industry, agriculture, trade, arts and crafts. Shows the play spots of the people as well. SM-316M.

**HOFFBERG Productions, Inc. Dept. SM-M.** 362 West 44 St. New York 18, New York, offers two films covering the high lights of Florida. 10 min. each. Sale—\$25 each.  
**Floridian Curiosities.** SM-317M.  
**Busy Spots in Florida.** SM-318M.

**SM-326M—Henry Moore.** 13 min. Color. Sale—\$150; rental \$20. A. F. Films, Inc. Dept. SM-326M, 1600 Broadway, New York 19, New York.

Pictures the work of England's greatest artist today. Shows that the distortions of the human figure in Moore's sculpture come directly from his emotional knowledge of human mobility which he often witnessed during the London blitz.

**WORLD in Color Production, Dept. SM-M.** 106 West Church St. Elmira, New York, offers two films on Chicago. 3½ min. Silent. Sale—8 mm. color \$7.50; black and white \$2.16 mm. color \$14.75; black and white \$4.

**Chicago.** Covers all the high lights of the great city. Ends with shots of the city's lights as seen from the Outer Drive. SM-323M.

**Chicago Natural History Museum.** Covers the most outstanding displays in this world famous building. SM-324M.

**SM-325M—Bicycling Safely Today.** 20 min. Loan. Bicycle Institute of America, Inc. Dept. SM-325M, 122 East 42 St. New York 17, New York.

A safety message with a positive approach, showing proper methods of bicycle riding. Scenes show bicycle riding club members touring the countryside and youngsters pedaling to school. Bicycling as it was practiced in the early '90s adds a note of amusement.

**SM-337M—Your Movie Camera and How to Use It.** 1 reel. Sale—\$90 color; \$45 black and white. Bailey Films, Inc. Dept. SM-337M, 2044 No. Berendo St. Hollywood, California.

Teaches the fundamentals of camera work. An amusing story calls attention to some of the foibles of human nature which sometimes cause bad results in picture taking. Right and wrong are contrasted, and right is emphasized. Valuable for teachers and administrators interested in making records of class and school activities.

**SM-331M—Green Gold (Bananas).** 1 reel. Color. Sale—\$55.25. Motion Picture Service, Dept. SM-331M, Pan American Union, Washington 6, D. C.

Depicts clearing and surveying rich jungle land to make banana farms. Shows a rhizome or rootstock (about the size of a head of cabbage) being planted, and the overhead irrigation using giant lawn sprinklers 30 feet high. Follows the growth of the fruit from the bud and the embryonic fingers to the harvesting. Transportation from the plantation to ships is illustrated.

**SM-335M—An Industrial Lakeport—**(Buffalo, N. Y.) 2 reels. Black and white. Sale—\$100; rental—available from film libraries. United World Films, Inc. Dept. SM-335M, Education Division, 1445 Park Ave. New York 29, N. Y.

Demonstrates the fact that industrial centers tend to develop where there is a natural focus of trade routes facilitating the supplying of raw materials and the marketing of finished products. Through the eyes of a group of Sea Scouts the development of Buffalo is shown.

**SM-333M—Craftsmanship in Clay: Glaze Application.** 10 min. Color. Sale—\$75; rental—available from film libraries. Educational Film Library Association, Inc. Dept. SM-333M, Suite 1000, 1600 Broadway, New York 19, New York, and Audio-Visual Center, Dept. SM-333M, Indiana University, Bloomington, Indiana.

Introduces glazing as an activity of interest to pottery makers. Demonstrates four methods of applying glaze: dipping, brushing, pouring, and spraying. Useful for teaching the basic skills and motivating interest in ceramics for arts and crafts classes on the high-school level.

**SM-334M—The National Gallery of Art.** 20 min. Loan. Educational Department, National Gallery of Art. Dept. SM-334M, Washington 25, D. C.

Shows the interior of the building with a brief tour through many of the galleries.

**FRITH Films, Box 565, Dept. SM-M.** Hollywood, California, offers two color films for geography, history, and social study groups on the lower, middle, and upper elementary grade level. 1 reel each. Sale—\$65 each.

**Bob Gaffner, Fishermen's Helper.** Bob's Uncle John teaches him many things about the picturesque life of the Pacific Coast fishing industry. Bob, sincere in his efforts to help the fishermen, is repaid by them with tales of their exploits at sea. Information about harbors and fishing is given, and a strong character sketch of a normal American boy is presented. SM-310M

**Bob Learns about Ocean Trade.** Bob learns how each country exports the products it can raise best and cheapest. He sees the ebb and flow of products in and out of a large harbor. He also learns about shipping, cargo ships, and the men who work in the industry, such as Pinkerton guards, longshoremen, and checkers. One cargo includes a \$35,000 shipment of wild animals from Siam for our zoos and circuses. SM-311M

For more facts use Inquiry Card. SM-57M

**TO PROLONG THE LIFE OF YOUR MOVIE FILM**

CORONET • RIVA  
S.V.E. • MCGRAW-HILL  
YOUNG AMERICA  
POPULAR SCIENCE

ALL GIVE... AT NO EXTRA COST TO YOU  
THE FAMOUS

**VACUUMATE**

**FILM PROTECTIVE PROCESS VAPORATE**

The SUPER  
PROTECTS AGAINST Scratches, Fingermarks,  
Oil, Water and Chemical Changes  
ONE TREATMENT LASTS  
THE LIFE OF THE FILM  
British Film Rejuvenated

Look For Vacuumate On The Leader!  
LABORATORIES IN KEY CITIES THROUGH U.S.  
CANADA AND PHIL. ISLS.  
Write For Information Now  
VACUUMATE CORP., 446 W. 43rd ST., N. Y.

- PRINCIPALS
- SUPERINTENDENTS
- GUIDANCE DIRECTORS

Are you ever in a quandary when asked to recommend a boarding school or junior college for one of your students? Do you wonder which school will best meet the specific needs of this boy or girl?

The staff of the School Bureau of Parents' Magazine has visited all types of schools throughout the country. This first hand knowledge enables us to select schools to meet individual requirements. It is available to you.

Write us fully, giving all pertinent information. We will recommend schools and have catalogs sent to you. Or, if you prefer, have the parents write to us direct.

School Bureau  
Parents' Magazine  
33 Vanderbilt Ave.  
New York 17, New York

For more facts use Inquiry Card. SM-58M

**Checker COAT RACKS**

12 types of space-saving steel racks that keep clothing aired, dry and "in press". Both stationary and portable types in sizes to fit any space or capacity requirement. Floor racks, wall racks, combination units with lock boxes, fold-away racks, storage racks for band uniforms and complete check rooms.

Write for Bulletin  
CK-27

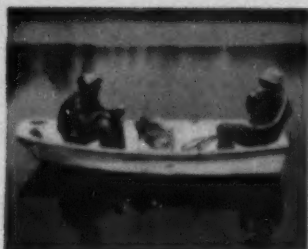
**VOGEL - PETERSON CO.**  
624 So. Michigan Ave. Chicago 5, Ill.

For more facts use Inquiry Card. SM-59M

**Door Signs • Name Plates • Desk Signs**

Any Wordings. Any Name. One, several or many. Durable Lifetime Engraved Plastic. Write for free circulars, samples.

**HULL SIGN CO.**  
Wau Winfield 1, N.Y.



In film, "What Makes Things Float?" these young boys consider the problem

**SM-300M—What Makes Things Float?** 1 reel. Sale—\$40; rental—\$3. Instructional Films, Inc. Dept. SM-300M, 330 West 42 St. New York 18, New York.

Two boys, spending the day fishing, wonder why some things float and others don't. They perform two simple experiments in their boat. Their partial solutions set the focal problem; how heavy can any object of a given size be and still float? The film is another in the elementary-level series "Experiences in Science."

**UNITED Nations Film Distribution Unit**, Dept. SM-M, 1600 Broadway, New York 19, New York, announces the first two units in a new series of films, "This Is the United Nations," using the "screen magazine" technique. Each film tells the human interest story behind the decisions made in the Council Chambers at Lake Success and includes shots of the General Assembly in session. Rental—\$2.50 each.

**Screen Magazine No. 1**, 15 min. Contains the story behind these headlines: "General Assembly Acts to Make Jerusalem an International Area," "Under International Civil Aviation Organization," "25 Weatherships Promote Safety at Sea," "The Nations Fight Tuberculosis—25 Million Children Tested," and "East and West Unite in Voting Aid to Underdeveloped Countries." SM-301M. **Screen Magazine No. 2**, 13 min. Contains the story behind these headlines: "President Romulo Urges Accord on Atomic Energy," "Unique Method of Interpretation Assists at U. N. Meetings," and "U. N. Children's Emergency Fund Helps Feed 6 Million Children, Clothe 2 Million." SM-302M.

**SM-340M—Birth of a Southern Pine.** 15 min. Color. Loan. (Also available for sale—\$60). Southern Pulpwood Conservation Association, Dept. SM-340M, 1506 First National Bank Building, Atlanta 3, Georgia.

Portrays the process of reproducing a pine tree. Shows the seedling growing in the grass on its way to becoming a mature tree.

#### Film Catalogs

**Filmstrips and Other Pictorial Material from Britain** December 1949. British Information Services, Dept. SM-375M, 30 Rockefeller Plaza, New York 20, New York. Free.

The 45 filmstrips described here are accompanied by lecture notes and sell for \$1 each. Picture sets and illustrating subjects of historic and current interest are also included.

**Official Film Catalog**. Official Films, Inc. Dept. SM-377M, 25 West 45 St. New York 19, New York. 36 pages. Free.

Both 16-mm. and 8-mm. films in sound and silent versions are listed. Many of them are also available in Spanish and Portuguese versions.

**Allied Independent Producers Combined 1950 Catalog of Educational**

**Films**. Allied Independent Producers, Dept. SM-376M, 2044 No. Borendo St. Los Angeles 27, California. 80 pages. Free.

Lists films produced by the following companies: Academy Films, Arthur Barr Productions, Paul Hoeffer Productions, Johnson Hunt Productions, and Bailey Films, Inc.

**Guide to Art Films**. Compiled by Dorothy E. Gilbert. American Federation of

Arts, Dept. SM-378M, 1262 Hampshire Ave. N. W. Washington 6, D. C. 28 pages. 50¢.

Lists 265 American and foreign films on art currently available in the United States. Size, length, source, rates of rental, and sale prices are given.

**A F R Film Catalog**. American Film Registry, Dept. SM-379M, 28 E. Jackson Blvd., Chicago 4, Ill. 38 pages. Free. Educational, travel, sports, historical,

science, comedy, cartoon, and children's films are listed.

**Westinghouse Motion Pictures for School Use**. Westinghouse Electric Corp. Dept. SM-381M, 306 Fourth Ave. Box 1017, Pittsburgh 30, Pennsylvania. 23 pages.

Describes subjects in the fields of jet propulsion, electricity, radio, nutrition, social science, and others, which are available free.

For more facts use Inquiry Card. SM-898M

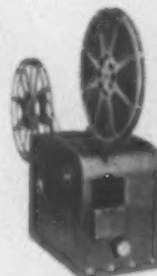
## In the long run... it's always Bell & Howell!

For simplicity, dependability... for long years of hard use it's B&H precision motion picture equipment.

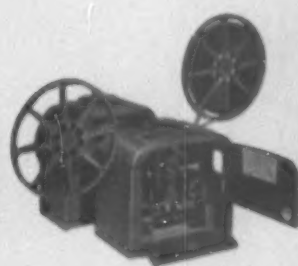
Yes, Bell & Howell products are designed to meet every school or church requirement. That means they must be easy to handle and operate... give top performance for a lifetime.

You can count on it... they will!\*

\*Guaranteed for life. During life of product, any defects in workmanship or material will be remedied free (except transportation).



**Single-Case Filmsound**, 16mm projector shows sound or silent films, still picture and reverse. Light, compact... everything in one case for convenient carrying and storage. Built-in 8-inch speaker operates within the case or removed from it. Larger, separate speakers available for single or multiple use. \$399.50



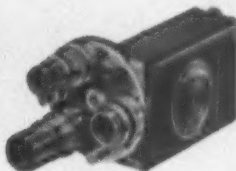
**New Academy Filmsound**. Has some outstanding features as the Single-Case Filmsound, but is designed for larger audiences. 8-inch, 12-inch or large power speaker available as desired. With 8-inch speaker, \$474.50



**Filmoore 16mm Sound Projector**. High-intensity arc illumination for sound film projection in largest auditoriums and outdoors. With cabinet-type rollaway base, \$2250. Other lower priced models available.



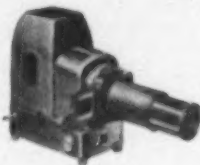
**79-DA Camera**, 16mm turret-type with variable viewfinder matching lens in use. Seven speeds. With 1" f/1.9 lens only, \$307.20



**Auto-Master 16mm Camera**. Magazine loading. Three-lens turret head with automatically matching viewfinders. With 1" f/2.5 lens only, \$322.50



**Auto Load 16mm Camera**. Five speeds including slow motion. Quick magazine loading. Fast f/2.5 lens. Most compact of all 16mm cameras. \$162.50



**Duo-Master Slide Projector**. Brightest of all 300-watt slide projectors. Easy loading, high definition, steady projection. \$96.50



**Foton 35mm Still Camera**. Ready for action after every shot. No knobs to turn. Sequence of shots, too—up to 6 per second. Unequaled T.22 (f/2) Cooke-Anstol lens calibrated in T-stops. \$498

### Sharper pictures than ever before!

The new Super Proval lens with built-in field corrector keeps picture edges clean and clear... gives far greater sharpness than ever before. Featured on all new Bell & Howell 16mm projectors, except the Filmoore. Also fits many older B&H projectors. Write for information.

You buy for a lifetime when you buy **Bell & Howell**

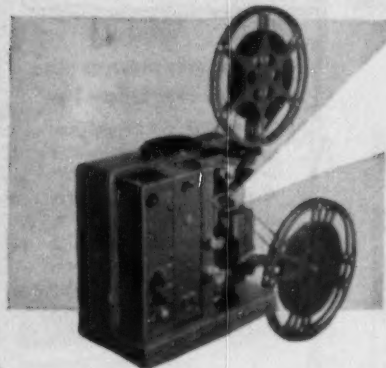
7123 McCormick Road, Chicago 45

There's nothing like **DETAIL** for emphasis



**YOU GET THE MOST OUT OF YOUR 16mm FILMS when they are projected with the**

*RCA "400"*



Look at the detail in the soap bubbles, the highlights on the hair, the features of the child's face. You see them all sharp, clear and realistic—when scenes like this are projected with the RCA "400."

Comparison tests of projected screen images—for detail, contrast, brilliance and depth—with other projectors have proved that the RCA "400" is the finest 16mm projector money can buy.

Compare the RCA "400" on sound reproduction. You'll hear voices, music, and sound effects reproduced with the dramatic realism of theatre-like sound. Compare the RCA "400"

for simplicity of threading, for ease of operation, for dependability.

Make this convincing test—before deciding on a 16mm sound projector. Ask your RCA visual products dealer to let you see and hear one of your own 16mm sound films demonstrated with the RCA "400". Send for illustrated literature and the name of nearest dealer. Write Department 81E.

**RCA "400" JUNIOR.** The only single-lens standard 16mm sound projector of fully professional quality.

**RCA "400" SENIOR.** Provides theatre-quality reproduction of 16mm sound and pictures for larger audiences, auditoriums or larger rooms.

*First in Sound... Finest in Projection*



**VISUAL PRODUCTS**

**RADIO CORPORATION of AMERICA**

ENGINEERING PRODUCTS DEPARTMENT, CAMDEN, N.J.

In Canada: RCA VICTOR Company Limited, Montreal